



L.C. Jain is an academic and activist. He has been a keen participant observer of the Indian scene since Independence with commitment to Gandhi's concept of *antopasya*. His writings cover a wide range of topics. He is known for marshalling facts and figures to bear upon each issue and for offering suggestions at policy and programme levels.

L.C. Jain began his life as an activist soon after Independence through his involvement with relief and rehabilitation of persons displaced by partition. He worked with the Indian Cooperative Union, around Delhi organising rural agricultural cooperatives. He joined Kamaladevi Chattopadhyaya – a doyen among Indian Socialists in a most creative and challenging experiment of setting up a township at Faridabad (south of Delhi) for the resettlement of 50,000 displaced persons from the North West Frontier, on a self-help basis, helping them to build their own houses and small scale industrial enterprises. Again he was associated with Kamaladevi in fostering countrywide resurgence of traditional handicrafts and handlooms. In the 70's, L.C. Jain started Industrial Development Services – a techno-economic consultancy to assist industrial entrepreneurs.

With such a rich practical experience in so many spheres of developmental activities, many government and non-government agencies have drawn on the advice and expertise of L.C. Jain in matters of policy, planning and implementation of development specially at the grassroots.

Dam Vs Drinking Water

Parisar

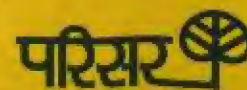
DAM

Vs

Drinking Water

Exploring the Narmada Judgement

L.C. Jain



Parisar

About Parisar

Established on June 5th, 1981, the World Environment Day by a group of independent citizens, Parisar focuses on improving the quality of urban environment. However, environmental concern is not merely restricted to planting of trees, beautification of surroundings and creation of sanctuaries for endangered species. Parisar attempts to interpret *environment* in its totality, i.e. from its rural and local implications to its global ramifications. Parisar questions the standard model of *development* that exploits natural resources and people at large to benefit a few.

This conviction has led Parisar to initiate people's movement to generate public pressure against encroachments on lakes, ponds, hills, open land etc., even resorting to legal interventions in a few cases.

Parisar is also involved in issues as diverse as urban transport planning, natural farming, urban planning, dangers of nuclear energy, destruction caused by large dams and has channelised its efforts to evolve models for environmentally sustainable development.

Organising lectures and discussions by experts in the field of environment on current issues and publication of a bi-monthly magazine *Parisar Varta* comprise the other activities of Parisar.

L.C. Jain was Member Planning Commission (1989-1990) and India's High Commissioner to South Africa (1997-98). He held visiting fellowships at universities of Harvard, Boston and Oxford. He is the recipient of the Magasaysay Award 1989, for Public Service.

Currently he is the Chairman of the Advisory Panel on Decentralisation and Devolution, the National Commission to Review the Working of the Constitution of India.

His earlier published works include *Grass without Roots – Rural Development Under Government Auspices*, 1985; *In the Wake of Freedom – India's Tryst with Cooperatives*, 1996 and *City of Hope – the Story of Faridabad*, 1998. Special papers include *Poverty, Environment and Development – A View from Gandhi's Window* for the International Institute of Environment and Development (IIED) and the World Bank (1988); *A Tour of India's Budgets 1947-2001 – impact on Social and Fiscal Deficit vis-a-vis the Directive Principles of the Constitution of India*.

L.C. Jain was a member of the group to review the Sardar Sarovar Project, appointed by Government of India (1996-97), and the Vice-Chairman, on the World Commission on Dams (WCD) – 1998-2000.

Dam Vs Drinking Water

Exploring the Narmada Judgement

L.C. Jain

An attempt to understand the ideology, presumptions, conclusions and consequences of the Judgement of the Supreme Court (18 October 2000) in the matter of Narmada Bachao Andolan versus Union of India and others. Petition (C) No. 319 of 1994



Parisar

Published in the interest of promoting informed discussion of development issues

Dam Vs Drinking Water
– Exploring the Narmada Judgement

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I

Introduction

With what lenses shall we look at the Supreme Court Judgement on Narmada? We have chosen a handful of them 1) indications from past experience, 2) overriding priority, and 3) judicial manageability.

For perspective we have kept in view, a sensitive approach which Nehru gave us 50 years ago towards rehabilitation of displaced persons; also what the Planning Commission tells us of our 50 year experience with displacement; the anguish of the Tribal population in these decades of development articulated by the Commissioner for Scheduled Castes and Scheduled Tribes that while the burden of displacement has fallen disproportionately on them, their share in the benefits is peripheral; and the cry of the future generation: be kind to the environmental and cultural heritage.

Since the Judgement is split (2:1) by number and head to foot on facts and in substance, we have chosen to focus on the Majority Judgement delivered by Justice B.N. Kirpal with which Justice A.S. Anand concurred. That may also help us to appreciate why Justice Bharucha chose to disassociate himself completely with the Majority Judgement.

Their respective orders are:

Kirpal J.:

There is and has been in the recent protests and agitations not only against hydel projects but also against the setting up of nuclear or thermal power plants. In each case reasons are put forth against the execution of the proposed project either as being dangerous (in case of nuclear) or causing pollution and ecological degradation (in the case of thermal) or rendering people homeless and poses adverse environment impacts as has been argued in the present case. But then electricity has to be generated and one or more of these options exercised.

While issuing directions and disposing of this case, two conditions have to be kept in mind, (i) the completion of the project at the earliest and (ii) ensuring compliance with conditions on which clearance of the project was given.

(Kirpal J., Anand J. concurred)

Bharucha J.:

I have read the judgment proposed to be delivered by my learned brother, the Hon'ble Mr. Justice B.N. Kirpal. Respectfully, I regret my inability to agree therewith.

I should not be deemed to have agreed to anything stated in Brother Kirpal's judgement for the reason that I have not traversed it in the course of what I have stated.

Until environmental clearance to the Project is accorded by the Committee of Experts (as aforesaid), further construction work on the dam shall cease.

(emphasis added)

The implications of such diametrically divergent orders pertaining to **further** construction of the dam are sobering. Two judges order: step on the accelerator. One judge orders: apply the breaks.

Each inch of the height of the dam raised has enormous implications on humans and environment, on animals and archaeology, on the course of life of lakhs of people and on the course of the river Narmada — to many as sacred as the Ganga. Some of the consequences are likely to be of an irrevocable nature. And, some of the consequences may not even be **judicially manageable**:

The most important quality of law in a free society is its power to command respect, acceptance and support from the community. This quality, which has been called "the power of legitimacy", is attached to those commands of established organs of government, which are perceived as flowing from the lawful exercise of their functions.

Not being armed by either the purse or the sword, the Court is uniquely dependent upon the power of legitimacy for the

compliance of its orders. Therefore, to ensure the continuance of this legitimacy, the Court should issue directions only after assessing the ground realities, and analysing the prospects of their being successfully implemented. Only orders which are judicially manageable ought to be passed so that their execution is guaranteed.

(A.M. Ahmadi, Former Chief Justice of India: 16th Dec. 1995)

If after seven prolonged years of weighing the pros and cons the three judges could not arrive at an agreed view, even on facts of the case, what of those who have to pay for the project with their lives and livelihoods? Any wonder then that the affected people are not soothed by the judgement. They can certainly be overpowered by the verdict on the arithmetical superiority of 2:1, but can they be inspired to fall in line with it? Or is its writ to be enforced by the coercive power of the State over the people?

It also raises other serious concerns. While Bharucha J has confined himself to the Sardar Sarovar Project (SSP) especially its environmental aspects, precisely and convincingly, the Majority Judgement has cast its net very wide. It has propounded several ideological positions, on human, cultural, social and development policy issues which were not before it in the first place and has taken positions from a slender selective knowledgebase ignoring the fact that there are many variations of each of the theme it has chosen. **The ideology it has propounded has a tone of finality about it. Sad to say the Majority Judgement views the displacement of the Tribal population from their place and their past mode of life, as a desirable goal by itself, and thus bestows general amnesty to displacement of the Tribals.** In the second place, the Tribal population, the most concerned people, were not heard by it at all before it laid out the vision of what it regards as a golden future for them.

It opens the door wide for the authorities to displace and despatch the Tribals to what it describes as the 'mainstream'. It fortifies this view with the assertion that wherever large projects have displaced the Tribals, the latter have "benefitted", are "enjoying a better life" and have gained access to "green pastures".

What is equally, if not more, distressing is that while recognizing that displacement will "disconnect them from their past, culture, custom and traditions", it sets these off against the necessity to harvest a

river “for larger good”. It believes that a proper rehabilitation package will raise their living standards. This assumption flies in the face of facts and empirical evidence. The Planning Commission tells us what has happened to millions of their kind who were **disconnected** from their past for sake of similar patriotic duty “for larger good” but eventually pauperized on the wings of rehabilitation packages.

25 million persons have been displaced since 1950 on account of development projects, of which, 40% are tribals.

Less than 50% have been rehabilitated – the rest pauperised by the development process.

(Mid-Term Appraisal 2000, Planning Commission)

The ideological preferences of the Majority Judgement and its cheerful assumptions about good future flowing out of rehabilitation packages, are a world apart from the ground realities as appraised by the Planning Commission. It amounts to indifference towards the well being of the displaced persons – even if one person. That makes it a frontal Human Rights issue. It is all a question of what we choose to see: a glass 20% full or 80% empty. We often do not look at those who have lost, but only the relatively small body of beneficiaries of the development projects; in the event we see the glass 100% full if not spilling over.

The Majority Judgement has also administered a blow to justice – a blow not confined to the instant case. While it has opened the door wide for displacement of the Tribal population it has sternly shut the door of the courts for the displaced persons from invoking PIL or whatever, to challenge development projects in general which otherwise may be destructive of their life, living conditions and preferences. The only exception it makes is that the challenge must be made “before the project starts” and before ‘thousands of crores of rupees have been spent on the project’. Since, for the most part, the projects are wrapped in secrecy, they can never be challenged. There is little public knowledge about Government projects and it is this iron curtain which has generated a movement for Right to Information. Unlike Europe and some other countries, the authorities do not provide any information or organize meetings with those likely to be affected and obtain their views if not their assent.

It is noteworthy that the Majority Judgement does not lay down a corresponding obligation on the Government that the latter ought not

to start a project unless and until it has provided prior and full information about the development project to the people and explained its implications fully to the affected people and obtained their prior assent, if not consent. The bias is evident.

It has vested nearly absolute authority in the executive to permit further construction of the dam on the latter’s own satisfaction about rehabilitation by barring not only PILs but also the Human Rights Commission from monitoring the progress of rehabilitation.

Further, it has expressed unqualified satisfaction with the contribution of large dams in general and has commended them for being cost effective, benign to environment and host of other virtues. We have attempted to examine the knowledge base of such presumptions of the Majority Judgement. Whether one agrees or not with the ideology propagated and other presumptions of the Majority Judgement, they should not be allowed to go without critical notice, for, they may turn up tomorrow as considered rulings of the apex court. The Ratio of the Judgement is crying to be weighed.

Then there are the specific issues relating to the SSP such as the available flows of Narmada waters, the height of the dam, its displacement effect and rehabilitation, impact on environment which were notoriously contentious even before the Narmada Water Disputes Tribunal (NWDT) was set up, and have so continued in one way or another even after the NWDT gave its AWARD. Alas, the Majority Judgement has not succeeded in providing a healing touch for the affected humanity nor any constructive and cooperative basis for resolution of the persisting contentions amongst party States. It has in fact accentuated them.

We have tried to unfathom the origins or sources of the various continuing contentions – political, legal, technical, financial, institutional and the character of decision-making. In the process, one of the distressing discoveries we make is how **unreliable and inept** the Tribunal was on the whole, and how susceptible it was to political pressures. It performed one somersault after another under political influence on several issues.

For example, the Tribunal rejected Rajasthan’s claim to be a coreparian state – subsequently the Tribunal reversed its order at political intervention. It agreed one day, to **delete** from its brief the **determination** of utilizable quantum of water flows at the request of Chief Ministers and Prime Minister standing behind them, but subse-

quently claimed in its Final Order that it had 'determined' the flows. In its Final Order it did not debar a review of the height of the dam, but later in its Further Report (the scope of which by law, is limited to 'explanations' only) it prescribed at the request of Gujarat that the height of the dam cannot be reviewed before 45 years. What is laughable is that it justified this material albeit unlawful amendment of its Final Report on the pretext that this direction was left out of the Final Order due to "**inadvertence**":

*Order of the Tribunal: The intention of the Tribunal was that not only Clauses III and IV but also all other consequential clauses should be made subject to review after 45 years but **due to inadvertence**, only Clauses III and IV were mentioned. A new Clause, Clause XVI should, therefore, be added in the Final Order to the following effect. In addition to Clauses III and IV (mentioned in Clause V), our Orders in Clause VII with regard to Full Reservoir Level and Maximum Water Level of the Sardar Sarovar are all made subject to review at any time after a period of 45 years from the date of publication of the Decision of the Tribunal.*

(emphasis added)

The tribunal grossly underestimated (by a factor of 1:6) the number of families to be displaced which has gone up from 7,000 to 41,000 families – and materially and monumentally changed the assumptions made about the magnitude of the rehabilitation task. And, it is on this miscalculation that it settled the height and superstructure of the dam and the areas to be submerged.

The sherpa State Madhya Pradesh which agreed to carry the load of one displaced person on its shoulders to Mount Everest is now to carry the load of six. It has been ordered by the Majority Judgement to do so without demur. The miscalculation of the Tribunal has become the principal cause of the clash among state governments as well as between the affected people and the Government, and now the Majority Judgement has added fuel to the fire by commanding the obedience of the Tribunal by all especially Madhya Pradesh at all cost.

Worse still, the Majority Judgement does not even admit, let alone concede that the directions of the Tribunal are not binding on the persons to be uprooted (euphemistically called affected), who were not before the Tribunal nor summoned by the latter at any stage. They

were handed over punishment by proxy. The Majority Judgement does exactly the same. Can their compliance be secured by fiat? And would that help to alleviate poverty/or accentuate it:

The institutional basis of poverty: Those materially deprived feel acutely their lack of voice, power, and independence. This helplessness subjects them to rudeness, humiliation, shame, inhumane treatment, and exploitation at the hands of the institutions of state and society.

They are prevented from taking advantage of new economic opportunities or engaging in activities outside their immediate zone of security. Threats of physical force or arbitrary bureaucratic power make it difficult for them to engage in public affairs, to make their interests known, and to have them taken into account. And unaccountable and unresponsive state institutions are among the causes of relatively slow progress in expanding the human assets of poor people.

(World Development Report 2000/2001
– Attacking Poverty, World Bank)

There is also a curious aspect. Being not satisfied with the rehabilitation of the displaced and mitigation of environment, the Supreme Court had itself stopped further construction of the dam for a period of about 4 years. (May 1995 to February 1999). The Majority Judgement has failed to mention this momentous event in the history of the project, which has otherwise been written up in great detail. Why this omission?

The Majority Judgement goes to the length of deprecating any suggestion for moderating the 455 ft. height of the dam disregarding that the suggestion is patently motivated by the concern to reduce the scale of human displacement and the extent of draft on environmental resources. In the entire Judgement, the only thing that remains unscathed and holds, is the height of the dam. As we have shown the height of the dam is being protected more by **inadvertence** on the part of the Tribunal than prudence.

Then we come to the sorrowful part. While it rightly reiterates the urgency of meeting drinking water needs of the population of the scarcity areas of Gujarat, the effect of the Majority Judgement would be the very opposite: it would thwart and delay the provision of drinking wa-

ter to the villages. It does not show that it is sufficiently cognizant of the long gestation period (7,10,15 years) involved if the dam is to remain 'as the only solution' in meeting the drinking water needs of the deprived areas. Nor it appears cognizant of the fact that while the construction is pursued to its full height of 455 ft, the dam will financially starve all alternative means which Gujarat has itself listed as necessary and feasible for providing drinking water within the short period of one to two years.

Regrettably, the Majority Judgement has accepted the Gujarat line that for meeting the water needs of the scarcity areas of Gujarat, the **dam is the only solution**, ignoring formidable evidence to the contrary including the new declared policy of Government that was born out of rude awakening caused by recent severe drought in Gujarat/Andhra etc.

The attention of the entire country is today focussed on the drought in Rajasthan, Gujarat, Andhra Pradesh and some other parts of the country. A concerted effort has been mounted by the Centre and the State governments to alleviate the suffering of the people and the cattle in drought-hit areas.

One of the real gains of the challenge posed by the drought, however, is that the country is today talking not only about the problem but also about solutions to it. Solutions that are practical, appropriate and durable. In particular, I see widespread interest everywhere in rain water harvesting and other water conservation ideas.

No single initiative is adequate to solve the problem of drinking water. We necessarily have to follow diverse routes and a plurality of programmes to achieve our objective. But, amongst all of them, the one idea that stands out for its simplicity, efficacy and affordability is rain water harvesting. Capture rain water, store it and use it – it is as simple as that. If appropriate technologies are built around this simple idea, they can provide decentralised, local-level solutions that can considerably meet the drinking water needs of our urban and rural populations.

(emphasis added)

Let us all heed the Meghdootam of rain-water harvesting and ensure clean and adequate drinking water to every citizen of this country.

The essence of this new policy in the words of Prime Minister Atal Behari Vajpayee is: **it is not wise to rely on any single solution**. The Majority Judgement has solidly ignored the aforesaid policy pronouncement of May 22, 2000, which came out months before the Judgement in the instant case, and which underscores the value of alternative means for providing drinking water:

This change in policy has not come about overnight. The Centre for Science and Environment (CSE) is one of the organisations which has played a critical role through sustained studies and education of policy makers backed by inspiring examples of reports of people's successful initiatives in water starved areas, to have brought about this change in Government approach. The following extracts from CSE's Dying Wisdom recall the long journey:

It is probably a good thing that this report on the traditional water harvesting systems of India is going to be published as the 20th century and the second millennium of the Christian calender draws to a close. It only shows how extensive are our roots and traditions and how important they are for meeting the challenges of the next century and how important they are for meeting the challenges of the next century and millennium – howsoever modern and newfangled they may appear to be. Hindi litterateur Mahadevi Verma once said, it is not possible for any human being to take a step forward without putting one foot firmly on the ground. Similarly, a society which tries to move ahead without keeping itself firmly rooted in its own traditions, tends to fall.

The idea for such a report came to us because of two different reasons and events. The first was the growing anti-dam movement in the country, which was demanding less socially and ecologically destructive systems of water development. We, therefore, asked ourselves the question: What would such systems be? Could they be found in our traditional systems of water management?

In August 1987, we, alongwith Anupam Mishra of the Gandhi peace Foundation, happened to come across the extraordinary water harvesting devices of the Thar desert called kundis.

We took a small road that goes through the dry Churu district, which is full of beautiful sand dunes. Just as we crossed Haryana and entered Rajasthan, we began to see some unique structures on both sides of the road, which looked like huge concrete saucers on the landscape, with a Buddhist stupa in the middle.

It turned out to be a structure for collecting rainwater to meet the needs of local people and animals. As we moved ahead, we saw several animal herders drawing water out of them to quench the thirst of their animals. On many structures we saw locks to protect the stored water, which showed how precious water was to them. During that journey, we saw dozens of structures of different shapes and sizes, which had been ingeniously constructed in a variety of places – in courtyards, in front of houses, in open agricultural fields. It was an amazing discovery for us: People can be so intelligent and resourceful in making the best of their environment.

This report is the result of a decade – long journey and in many ways it constitutes the determining idea of a lifetime. It was one thing to say in our first report in 1982 that India has a major environment problem looming ahead, it is quite another thing now to say that some of the answers to this crisis may lie in our own traditions, in the hands of our communities, and at a pretty low cost. For this reason, we have dedicated this report to the Native Wisdom of the Rural Communities of India. And despite all the gloom, it projects a ray of optimism.

(Extracts from “Dying wisdom”,
State of India's 4th Environment – Citizens' report.
By Anil Agarwal and Sunita Narain, Eds. 1997,
published by Centre for Science and Environment).

Oddly, while the Majority Judgement forcefully argues at some length that development choices do not lie in the domain of the Courts, and

goes out of its way to designate the Prime Minister as the final arbiter about SSP, it has stuck steadfastly to the view that dam is the “only” solution to provide drinking water to scarcity areas of Gujarat, notwithstanding the Prime Minister's view that it is not wise to rely on any single solution.

This emerges as the key to the understanding of why the verdict of the Majority Judgement is so dam-centred. In turn that also throws light on why it named the petitioner (the Narmada Bachao Andolan; NBA) as an “anti-dam organization” and the dismissal wholesale of NBA's petition which was in the main an account of the struggle of the uprooted persons for justice.

The more serious consequences of the verdict are clear. While hitherto the issue was: **dam for drinking water**, thanks to the Majority Judgement, the issue is now converted into '**dam versus drinking water**' or more tragically **dam minus drinking water**.

II

The Ideology of the Majority Judgement

The following extracts from the Majority Judgement speak of its ideology which has governed the positions it has taken about the tribal population and its displacement.

The tribals who are affected are in indigent circumstances and who have been deprived of modern fruits of development such as the tap water, education, road, electricity, convenient medical facilities etc. the majority of the project affected families are involved in rain-fed agricultural activities for their own sustenance. There is partial employment in forestry sector. Since the area is hilly with difficult terrain, they are wholly dependent on vagaries of monsoon and normally only a single crop is raised by them.

Displacement of people living on the proposed sites and the areas to be submerged is an important issue. It is a fact that people are displaced by projects from their ancestral homes. Displacement of these people would undoubtedly disconnect them from their past, culture, custom and traditions, but then it becomes necessary to harvest a river for larger good. A nature river is not only meant for the people close by but it should be for the benefit of those who can make use of it, being away from it or near by.

It is not fair that Tribals and the people in un-developed villages should continue in the same condition without ever enjoying the fruits of science and technology for better health and have a higher quality of life style. Should they not be encouraged to seek greener pastures elsewhere, if they can have access to it.

In a democracy welfare of the people at large, and not merely of a small section of the society, has to be the concern of a responsible Government.

"Conflicting rights had to be considered. If for one set of people namely those of Gujarat, there was only one solution, namely, construction of a dam, the same would have an adverse effect on another set of people whose houses and agricultural land would be submerged in water. Perhaps the need for giving the green signal was that while for the people of Gujarat, there was no other solution but to provide them with water from Narmada, the hardships of oustees from Madhya Pradesh could be mitigated by providing them with alternative lands, sites and compensation. In governance of the State, such decisions have to be taken where there are conflicting interests. When a decision is taken by the Government after due consideration and full application of mind, the Court is not to sit in appeal over such decision.

It is not fair that tribals and the people in un-developed villages should continue in the same condition without ever enjoying the fruits of science and technology for better health and have a higher quality of life style. Should they not be encouraged to seek greener pastures elsewhere .if they can have access to it either through their own efforts due to information exchange or due to outside compulsions.

The Bhils, who are individualistic people building their houses away from one another, are getting socialised; they are learning to live together"

The displacement of the tribals and other persons would not per se result in the violation of their fundamental or other rights. The effect is to see that their rehabilitation at new locations they are better off than what they were. At the rehabilitation sites they will have more and better amenities than which they enjoyed in their tribal hamlets. The gradual assimilation in the mainstream of the society will lead to betterment and progress.

(emphasis added)

In short, the Majority Judgement believes that displacement is not 'a necessary evil' but a 'desirable good' that will enable the indigent Tribals to 'be benefitted', become "better off" and join the "mainstream".

Having taken that ideological position, it considers it necessary to prevent any challenge to the decisions of the executive on development projects:

It is against the national interest and contrary to the established principles of law that decisions to undertake developmental projects are permitted to be challenged after a number of years during which period public money has been spent in the execution of the project.

The Court, no doubt, has a duty to see that in the undertaking of a decision, no law is violated and people's fundamental rights are not transgressed upon except to the extent permissible under the Constitution. Even then any challenge to such a policy decision must be before the execution of the project is undertaken.

Any delay in the execution of the project means over run in costs and the decision to undertake a project, if challenged after it's execution has commenced, should be thrown out at the very threshold on the ground of laches if the petitioner had the knowledge of such a decision and could have approached the Court at that time. Just because a petition is termed as a PIL does not mean that ordinary principles applicable to litigation will not apply. Laches is one of them.

"Public Interest Litigation [PIL] was an innovation essentially to safeguard and protect the human rights of those people who were unable to protect themselves. With the passage of time the PIL jurisdiction has been ballooning so as to encompass within its ambit subjects such as probity in public life, granting of largess in the form of licences, protecting environment and the like. But the balloon should not inflated so much that it bursts. Public Interest Litigation should not be allowed to degenerate to becoming Publicity Interest Litigation or Private Inquisitiveness Litigation.

For any project which is approved after due deliberation the Court should refrain from being asked to review the decision

just because a petitioner in filing a PIL alleges that such a decision should not have been taken because an opposite view against the undertaking of the project, which view may have been considered by the Government, is possible. When two or more options or views are possible and after considering them the Government takes a policy decision it is then not the function of the Court to go into matter afresh and, in a way sit in appeal over such a policy decision.

Contrast the ideological postulates of the Majority Judgement as they pertain to Tribals with the views of the Commissioner for Scheduled Castes and Scheduled Tribes — the statutory authority created by the Constitution to care for the wellbeing of the Scheduled Castes and the Scheduled Tribes — the population in question here. The Commissioner had filed a Writ Petition No. 1201 of 1990 with the Supreme Court (which was before the same Bench) attaching with it, a copy of its 29th Report which stated:

we have reached a stage in our national life where a fresh debate from the very first principles, is a must on the basic questions of the concept of development and the partnership of people therein. This question has now become crucial for the tribal people. The very existence of the tribal communities is at stake.

About 15% of the tribal people have already been displaced in one form or the other. They have lost everything they had in this process. But even now there is no realisation that they have lost something for the sake of national development, not to speak of any assessment of their loss in this process. If this process continues as it is, that day is not far when the tribal people will have no place to stand on in their own homes. In many areas it has already happened, this is happening in many other areas.

When we add up all projects we find that it is the tribal who is the sufferer everywhere and the benefits of development are accruing to other people.

A number of issues have come to the fore clearly for the first time in the movement of Narmada Valley. But the most serious turn has come only recently. The claims of state-interest

on the basis of comparative strength of numbers and public-interest under the cover of all-party consensus are being presented by the beneficiary groups as irrefutable arguments in their favour. When such arguments are put forward for a single project, they appear to be very simple and obvious.

Therefore, the question is whether these arguments can be accepted when the issues relate to certain basic principles, human values and constitutional rights.

These arguments are not special for any one project. But they have come into full relief in the struggle of Narmada Valley. In my opinion, it is clear that like many other development projects in the case of Sardar Sarovar as well, there is violation of the law, of the Constitution and of human rights and the State is ignoring its Constitutional responsibility of protecting the tribal communities. There will be no change in the basic situation which has arisen because of the proposed rehabilitation for the project affected people of Sardar Sarovar so long as the affected people do not accept the alternative of their free will.

Similarly, the facts that there has been grave injustice so far and there is grave injustice even now elsewhere, cannot be accepted as an arguments to justify a comparatively less severe forms of injustice. Injustice is injustice, and wherever people are fighting against injustice their struggle are justified.

An entirely new and unexpected situation has arisen in the history of our national development because of the people's struggle in the Narmada Valley on the issue of displacement. So far the people's movement against displacement were sporadic and, more or less, isolated. Moreover, displacement itself was accepted as inevitable and the affected people would just beg for some relief. In the Narmada struggle people from all parts of the country facing the backlash of development have come together and are raising perhaps for the first time the question of basic Constitutional rights. And this issue has not been raised only at the conceptual level for the sake of an argument or debate; instead it is backed by people's own understanding and their resolve. That is not all. As the real

nature of issues has become clearer, questions are being raised against the concept of development itself.

In any case, a situation has arisen in the Narmada Valley Project where there is a direct clash between the obligation of the state to act in accordance with the law on the one hand and the affirmation of the Constitutional and human values on the other. Displacement and the struggle of people in Narmada Valley as its symbol have become the touch-stone for our national commitment to human value. **Can the people be evicted from their homes without their consent? Is the social identity of a people negotiable? Can the tribal community be forced to stand on a precipice in full know of the fact that disorganisation as a community and destitution for its members are the destiny? Can justice be determined on the basis of arithmetic of numbers? Can there be a barter between the survival-needs of some and more facilities and greater comforts for many?**

There is only one possible way out from this extremely regrettable situation, that is, all further activity with regard to Sardar Sarovar must be based on the consent of the people obtained after earning their confidence. The helpless utterances of 'ayes' and 'yes' under the deep shadow of such a project with regard to suggestions for preparing a plan of rehabilitation cannot be taken as their consent for moving out from their homes. Moreover **an extremely unfortunate situation has arisen in many areas. Force is being openly used in many cases against the project-affected people.** The ridicule of the people's resolution or preferring a 'watery grave' and the indirect terror through projection of the inevitability of submergence and its consequences as the dam gets filled finally, are being used for getting their helpless consent. This is characteristic of the unconcern of an inanimate instrument and power-intoxication of the rulers. **This is not in keeping with the sensitivity of our nation.**

(emphasis added)

There is also an academic study to be reckoned with:

In the 1950's composite package of compensation, rehabilitation and incorporation by choice in emerging economy was introduced in some parts of the country. This seems to have reflected the moral ethos of national freedom struggle. But 1960s to early 1980s was a period of regression from the earlier approach. Since mid 1980s under pressure of political mobilization of the project affected peoples and human rights activists there is a new trend at the conceptual level, to be more solicitous of the needs of the project affected populations and peoples. Even then a national policy of rehabilitation is still to be formulated.

“Twists and turns, ambiguities and ambivalences in the policies concerning the rehabilitation of mega-project affected population”:

*Executive Report of the Tribal Studies Committee (TSC)
Indian Council of Social Science Research, October 1999*

As for omnibus restrictions ordained by the Majority Judgement on recourse to Public Interest Litigation, and dismissal of the petition of the Narmada Bachao Andolan on the ground that the petitioner was “guilty of laches” i.e. delay in filing a challenge to the Sardar Sarovar Project where ‘thousands of crores of rupees’ had already been spent, let us recall the origins of PIL in India:

According to Pandian, J., “the seed of the concept of PIL were initially sown in India by Krishna Iyer, J., in 1976...while disposing an industrial dispute... who observed: “Our adjectival branch of jurisprudence by and large, deals not with sophisticated litigants but the rural poor, the urban lay and the weaker societal segments for whom law will be an added terror if technical mis-descriptions and deficiencies in drafting pleadings and setting out the cause-title create a secret weapon to non-suit a part. Where foul play is absent, and fairness is not faulted, latitude is a grace of processual justice”.

III

The Presumptions of the Majority Judgement — and its Knowledge-base

The Majority Judgement has been influenced not only by its aforesaid ideology, it has also made some conclusive and firm statements on a wide range of issues other than the SSP, that is, issues which were not before it by a long stretch. For example:

1. Large Dams have improved the living standards of the displaced persons — predominantly tribals.
2. Large dams are cost effective
3. The phenomenal increase in food production is due to large dams.
4. Large dams have improved the environment.
5. Hydro power is ecology friendly.
6. Higher electric consumption is an indicator of progress in living standards.
7. Precautionary principle not applicable to large dams.

We have attempted here to check these propositions against a wider knowledge-base to see how far the above propositions are proven or are presumptions, on the part of the Majority Judgement without subjecting them to a critical scrutiny. As the following discussion will show that there are many sides to each of the propositions assumed by it to be conclusive which is a regrettable error.

1. Large Dams have improved the living standards of displaced persons: predominantly tribals

The Majority Judgment

Since long the people of India have been deriving the benefits of the river valley projects.

A properly drafted R&R plan would improve living standards of displaced persons after displacement. For

example residents of villages around Bhakra Nangal Dam, Nagarjun Sagar Dam, Tehri, Bhilai Steel Plant, Bokaro and Bala Iron and Steel Plant and numerous other developmental sites are better off than people living in villages in whose vicinity no development project came in.

The views of others

a) Planning Commission, Mid Term Appraisal, 2000

25 million persons have been displaced since 1950 on account of development projects, of which, 40% are tribals.

Less than 50% have been rehabilitated — the rest pauperised by the development process.

(emphasis added)

b) The Commissioner for Scheduled Castes and Scheduled Tribes (29th Report; (Writ Petition 1201 of 1990 before the same bench)

About 15% of the tribal people have already been displaced in one form or the other.

When we add up all projects we find that it is the tribal who is the sufferer everywhere and the benefits of development are accruing to other people.

The very existence of the tribal communities is at stake. They have lost everything they had in this process. But even now there is no realisation that they have lost something for the sake of national development.

c) Bhakra Dam (1978):

“The Bhakra Project was completed in all respects and the Prime Minister dedicated it to the nation on 22 October 1963. There was a large gathering and everybody felt happy that the dam would confer immense benefits for all industrialists and agriculturists. It is curious to observe how we handle our projects without sparing a thought for the affected people.

When the Bhakra dam was built, the village of Bhakra, situated on the banks of the Sutlej, was submerged and the people built their houses on the adjacent hills. The project resulted in great suffering to the people of the village, but nobody took note of the people's representations. It was many years later, during one of my visits to the dam site, that I found that the new village or Bhakra had neither drinking water nor electricity, though surrounded by blazing brilliant lights.

(emphasis added)

This was indeed unfair and I asked the Bhakra Management Board to supply both power and water to the village. Even then, there were objections. The Management Board thought that this was not a proper charge on the Project. This indeed was an absurd approach

(Union Irrigation Minister, K.L. Rao)

d) Indira Gandhi Canal Project

Three Western districts Ganganagar, Bikaner, Jaisalmer are the sites of the Indira Gandhi canal project command area. Asia's largest wool markets; in 1961, the district had a 2:1 animal-to-people ratio. The Southern district of Jaisalmer had a 7:1:1 animal-to-people ratio with a per household ratio for cattle of 28.6, for sheep 53.3, for goat 12.2, and for camels, 6.9. In other words, Western, Rajasthan was very much a pastoral society and economy, dominated by communal institutions whose functions were inextricably linked to the extensive pastoral lanes, vegetative cover and watersheds, watering holes and ponds of the wide-open desert. Pastoral communities depended upon reciprocal, if not amiable, relations with settled and semi-nomadic communities hundreds of miles in each direction.

In 1961:

In Ganganagar district, there were 392,000 cattle, 189,000 buffalo, 287,000 sheep, 191,000 goat, 93,000 camels, 75,000 others. In Bikaner there were 289,000 cattle, 39,000 buffalo, 430,000 sheep, 104,000 goat, 38,000 camel, and 3,000 others. Rajasthan district gazetteers:

In Jaisalmer had a domesticated animal population of 990,000, including 294,000 cattle, 1,000 buffalo, 467,000 sheep, 186,000 goat, 29,000 camels, 11,000 donkeys, and 2,000 others.

Two young scholars lived with two transhumant communities of Rajputs and Raikas; both wrote on the complexity of the decision-making bodies, as well as their loss of power. These once-dominant desert dwellers have diminished access to common resources, and greater risks of maintaining livelihood as the Western Rajasthan desert has become privatized by canal settlers and controlled by canal state agencies with their priorities for intensive agricultural production. Pastoral-rights groups have documented the disappearance or rapid degradation of drought-hardy, indigenous grasses and shrubs in the canal area, as affordable fodder.

According to N.S. Jodha's studies in the Thar desert though "Progressive" welfare programs guaranteed a fair share of the privatized commons to the poor, in fact large landowners overwhelming received the land for themselves. Of the common lands distributed to the poor by these welfare programs, Jodha found that 64% subsequently changed hands, mainly because the poor were unable to develop the land with their paucity of assets and lack of support from community or State institutions.

In settled villages, informal village council adjudicate grazing rights on community grazing lands. Institutional rules and regulations determine, for example, the restricted times and types of animals to graze, the rotation pattern for grazing, the auction rights for dung collection, the restricted procedures for lopping off branches of community owned trees and for wood collection, and the use of watchmen for preventing villagers and outsiders from breaking these rules. Similar rules exist that protect and maintain the various water wells, tanks, and earthen embankments that litter the surrounding village lands. The revenues earned from the penalty and user fees from these lands.

Village institutions not only regulated the lives of pastoralists and cultivators, but also diverse castes of cobblers, potters, black-

smiths, barbers, healers, religious teachers, musicians, storytellers, and more. In each desert village, institutions decided upon compensation for these community providers, especially for those villagers whose services were not easily quantified, e.g., storytellers and religious workers. Councils run by the village, or by the appropriate caste community, would decide how to manage cremation and burial sites, sites for cattle carcasses, religious shrines, and the like. Councils decided upon the roles of caretakers, rules of access and use, fines and fees, for these public goods. In sum, a few basic aspects of village institutions should be noted for this discussion: They had oversight of public lands and common resources, with rules and regulations decided upon locally. Critically, these institutions incorporated into village life other community castes besides "cultivators." These characteristics are quite distinct from the modern canal institutions installed by central state authorities, which primarily exist for the benefit of cultivators, at the cost of vast numbers of village groups that once thrived in desert village life.

(Extracts from "There's A Snake On Our Chests":
State and development Crisis in India's Desert.
By Michael Robert Goldman,
Oct 1994.)

Sharavathi, Upper Krishna, Kali and Alamatti Dams and Naval Sea Bird Project (Karnataka)

Plight of Displaced Persons

They are known as DPs and this abbreviation was once meant to stand for displaced persons, those who have been uprooted in the course of implementation of the so-called developmental projects. But seen in the context of the boundless callousness of the authorities and of those in power towards these unfortunate victims the abbreviation might as well mean depressed persons or distressed persons.

The latest example for those who might fit into this changed connotation is over 8,000 families who have been evicted from their hearths and homes to facilitate the implementation of the **Naval Sea Bird Project** being set up at a whopping cost of Rs 25,000 crore near Karwar in Uttara Kannada

District. There is apparently some dispute about the very number of families to be rehabilitated under this project since the official and non-official figures not only do not tally but indicate a very wide discrepancy. While the official data made available have us believe that the number of families to be relocated is in the region of 4,444, the non-official figures put this number at 8,000. Such largescale variation would stoke serious doubts about the dependability of the methodology adopted while arriving at the official figures on this score.

... the fact that all is not well in the manner of implementation of rehabilitation programmes for these oustees is evident from the process earning the displeasure of judicial bodies like the National Human Rights Commission and the Karnataka High Court. The most distressing feature of this operation translocation is that it took exactly 10 years for mere conceptualisation of the rehabilitation programme. This is so because while the Sea Bird Project was announced in 1986, the Union Cabinet gave its approval for the rehabilitation package in 1996.

..... right from the days of the **Sharavathi** project, the first major hydro-electric project in the State, to the ongoing **Upper Krishna Project**, all attempts for meaningful rehabilitation of the affected people have been at best half-hearted and at worst a virtual fraud on all concerned. Again in Uttara Kannada District the last word is yet to be heard on proper rehabilitation of the people uprooted under the **Kali** Project, in Joida and Ramanagara areas.

... the number families to be uprooted under the Upper Krishna Project (UKP) is estimated to be around 60,000 in 135 villages of the undivided Bijapur district when the height of the **Alamatti Dam** would reach 519.6 metres. The pace of resettlement is said to be not what it ought to have been.

... it is not at all possible to gloss over the harsh truth that the act of snapping one's native moorings would itself leave its traumatic scar on his or her psyche and this kind of could-not-care-less attitude at the official and political levels towards

helping them to regraft their roots is nothing short of rubbing salt into their emotional wounds.

(Plight of Displaced Persons — Continuing neglect —
by N.C. Gundu Rao, Deccan Herald,
23 January 2001.)

Even this brief foregoing review of ground realities provides a strong reason why prior comprehensive surveys of families/villages to be uprooted are imperative to understand their resource base, community institutions and relations, sources of livelihoods from animals and forests and dependence on the village commons to ensure that the rehabilitation of the uprooted is able to be "better off". We refer to this aspect in a later chapter on Rehabilitation. It is a pity that the Majority Judgement has displaced community settlement with availability of civic amenities. "Dealing with the contention of the petitioners that the oustees were not offered a chance to resettle in Gujarat as a community. What the Award of the Tribunal required is resettlement of the PAFs in Gujarat at places where civic amenities like dispensary, schools, are available".

2. Large Dams are cost effective

The Majority Judgement

India has experience of over 40 years in the construction of dams. The experience does not show that construction of a large dam is not cost effective...

Views of others

a) 1958: Prime Minister Nehru

"Nehru was now more aware than he had been in earlier years of possible 'disease of gigantism'. He who, at the end of 1956, surveying the large Bhakra-Nangal dam had whispered to himself, 'These are the new temples of India where I worship', confessed nearly two years later that he doubted very much if the Government would have initiated such a project if it came before them at this time. Such a dam was exceedingly expensive, involved a considerable amount of foreign exchange and took a long time to be completed. All

that India had gained from it was electric power and little irrigation."

(In Jawahar Lal Nehru – a Biography (vol. Three) 1956-64, Prof. S. Gopal records Nehru's subsequent views on the subject expressed at the meeting of the Central Board of Irrigation, 17th November 1958).

b) 1980: Ministry of Irrigation

Report of the Expert Committee on rise of costs of Irrigation and Multipurpose Projects. GOI, 1981

"Experience of large number of Irrigation and Multipurpose Projects implemented so far shows that: (i) In a number of cases the time taken for completion is considerably more than initially estimated and consequently benefits have been realised much later than expected and (ii) The costs have been appreciably more than originally estimated and the returns have been smaller than anticipated.

c) 1986: Prime Minister Rajiv Gandhi

The situation today is that since 1951, 246 big surface irrigation projects have been initiated. Only 66 out of these have been completed; 181 are still under construction. Perhaps, we can safely say that almost no benefit has come to the people from these projects. For 16 years, we have poured out money. The people have got nothing back, no irrigation, no water, no increase in production, no help in their daily life.

(Address to the Conference of State Irrigation Ministers)

d) 1991: India: Irrigation Sector Review, World Bank, 27th June, 1991, (Vol. I, Main Report)

The reality is that one of the world's largest irrigation investments is performing unevenly and, on average, far below potential. Despite several decades of significant public investment in irrigation infrastructure, mainly large surface schemes, productivity is not breaking through to enable agricultural growth beyond the past threshold.

Paradoxically, India's major engineering achievements over the past half-century, resulting in massive expansion of surface irrigation, have contributed to the sector's current problems. With the focus centered on construction, the broader management needs of the sector were neglected, and the cumulative costs of this neglect are now apparent.

Over the past decade, the situation appears to have worsened. India cannot afford an over expended and under-performing sector. Sooner, rather than later, the burden will be financially unsustainable, and infrastructure will be physically unsustainable due to declining construction and maintenance standards. The situation is compounded in some area by environmental degradation. Above all, agricultural growth will suffer".

e) 1993-94: Central Water Commission: Financial Losses from River Valley Projects

According to Central Water Commission (CWC) data, losses from irrigation and Multipurpose River Valley Projects rose from Rs. 424 crore in 1980-81 to Rs. 945 crore in 1980-85 and then to Rs. 3124 crore in 1993-94. The Vaidyanathan Committee of the Planning Commission pointed out that the CWC figures underestimate the losses.

f) 1995: Union Minister of Energy & Water, N.K.P. Salve, 1995

Ultimately, in a developing country particularly, the environment and development can't be mutually exclusive. We have to synchronise and harmonise the two.

We are not going in for large dams any more. We want run of the river projects and to have smaller dams, if they are necessary at all, which will not cause any impediment whatsoever to the environmental needs.

We can hardly have a massive hydro project, except on the Brahmaputra, where we would be able to tame the river and make safe from flooding a very substantial area which gets

flooded every year. But that all takes money and it is true, the Brahmaputra project has disappeared.

g) 1999: Ninth Plan

Time and cost overruns due to changes in design and scope midway through execution are quite frequent in large public sector projects. In the case of large surface irrigation projects, in particular, this problem is so acute that several projects had alarming time and cost overruns.

A recent review of 187 Central sector projects, each costing more than Rs. 100 crores by the Department of Programmes Implementation (DPI) showed that, as on February, 1997 as many as 118 projects were running behind schedule and the time overrun varied from one month to 200 months. A study of a few major projects indicated that the cost overrun, for reasons other than inflation and changes in the duty/exchange rate regimes, ranged from 40% to 75% of the original estimates

To cite an example, an irrigation project in a State, which was initially designed in 1953 for flood protection and irrigation benefits to 5.7 lakh hectares, underwent drastic changes in design and scope, midway through execution, to include (a) hydel power generation, (b) an additional branch canal with a command area of 1.6 lakh hectares, (c) another main canal system taking off from the barrage with an aggregate command area of 3.25 lakh hectares, (d) extension of the embankments (flood protection) and (e) cost of watercourses as the project cost. Because of these changes, the project got delayed by more than 20 years and the cost escalation, as per the latest available estimates was 347.25 percent.

The 'top-down' approach in planning and implementation has led to formulation of schemes without assessment of the needs of the people.

It was observed that in almost all the TSP states, the major part of the Tribal Sub-Plan funds was spent on the creation of infrastructure like irrigation structures and buildings for

schools and health centres, most of which are not being used by the tribals for lack of complementary inputs.

Lack of accountability of the implementation agencies either to the Government or to the people has been the single major factor for diversion of funds in development programmes. It is well known that implementing agencies and administrators can get away easily with time and cost overruns or non fulfillment of targets by attributing these to factors beyond their control, many loose ends at the planning stage.

.....lack of people's participation in the implementation of programmes, lack of transparency in the operation of schemes and inadequacy of monitoring mechanism.

3. The Phenomenal increase in food production is due to large dams

Views of the Majority Judgement

Immediately after independence India was an importer of foodgrains with domestic production only at 51 m.t. By now the foodgrains production has reached 200 m.t. mark. The country has become marginally surplus in foodgrains. This is cited as the greatest indicator of achievement of large dams.

Views of others

a) Author:

While irrigation has made a contribution to increased food production in India there is an attempt by the protagonists of large dams to correlate total increased food production to large dams, to exaggerate the volume of contribution of the large dams. There are recent studies and analysis which suggest the need for caution in accepting claims such as have unwittingly crept into the Majority Judgement namely that the increase in India's food production from 51 MT to 200 MT is "the greatest indicator of achievement of large dams". Such a claim is compounded by the fact that irrigation is equated with large dams which howsoever important are only one of the multiple sources of irrigated agriculture in India. We refer here to some

recent studies only to make the point that the issue calls for rigorous analysis by experts.

b) Study of Indian Irrigation, 1999:

Thus, the claim made by a number of supporters of large projects that India has achieved food production of today due to large dams based irrigation is quite erroneous looking at the facts. The gross contribution, this calculation shows, is less than 10%.

A part of this 10% contribution from canals of M & M projects is actually from barrage based projects constructed after independence, as against those from storage based projects. Sharada Sahayak canal is one example of this. We will ignore this since information is not available as to how many of the M & M based projects were barrage based and what is their contribution in canal irrigation.

Secondly, to arrive at net contribution made by canal irrigation from M & M projects, we should subtract the production these lands would have yielded anyway.

Thirdly, Lands lost to canal and drainage infrastructure schemes typically represent 2-5% of the irrigated command area created. With schemes involving reservoirs, a further 3-8% of land is lost. Total land lost annually to reservoir inundation is estimated at 50,000 ha (World Bank, 1991: 78).

Thus going by World Bank (1991a: 41-2) estimates, land equal to at least 5-13% of irrigated areas of these projects is lost for either submergence (3-8%) or canals and other infrastructure (2-5%). For example, in case of SSP, while submergence would take up land equal to about 2.1% of area (39,000 ha) to be irrigated (1.8 M Ha), the total canal infrastructure is to take up 1,86,000 Ha (land equal to 10.3% of projected command area of the project). Thus utilisation of this additional 24.88 M Ha of irrigation potential would have taken out of production at least 1.99 M Ha of land, at 8% of additional irrigation utilised. This figure of 1.21 M Ha too seems to be an underestimate, as going by another of the World Bank estimate of land lost due to

reservoir inundation at 50,000 Ha per annum, over a period of fifty years, reservoir inundation alone would have taken out of production 2.5 M Ha. Though not all lands going under submergence is cultivable, a substantial part is. As far as land taken away for canals is concerned, almost all of it is cultivable land lying in the potential command of the project.

In post independence India, due to domination of large dam centered irrigation projects, there has been utter neglect of local rainwater harvesting systems. Thus, the area under tank irrigation has gone down from 4.8 M Ha in 1962-63 to 3.1 M Ha in 1986-87. Other sources give even higher amount of loss in area irrigated by minor surface schemes. Thus this loss of 1.7 M Ha of actual irrigated area too must go in the account of large irrigation dam projects. Actual figure thus lost from irrigated area is likely to be much larger, but for lack of reliable data, we will assume this loss to be only 1.7 M ha.

Another loss we have incurred in the process of achieving this M & M projects based irrigation is in terms of lands going out of production due to waterlogging and salinisation.

What is important to remember is that while thus adding less than 10.0% of additional foodgrains production, we have lost an opportunity of developing our water resources over a much larger area, much more equitably, sustainably, in a much more participatory and cost effective manner. The social, environmental and even economic costs incurred would have been much lower. The additional foodgrains production that would have been possible, if we had taken the alternative path, would have been much larger, it can be safely said. Unfortunately, it is very difficult to come up with figures of what alternative path would have produced, as it was just not tried.

In conclusion, it is clear that canal irrigation areas have made only marginal (less than 10%) contribution to food production in India since independence. If we subtract the losses we have incurred in the process of achieving this production from this achievement, the figure would be even less than 5%.

("Assessment of Irrigation Options: A study of Indian situation", A study done for WCD, 1999)

c) India Case Study, 2000

In 1993-94 irrigated agriculture accounted for about 60 per cent of foodgrains production. This too is not solely due to dam based irrigation strategy. Irrigation projects in India are classified into three categories: major, medium, and minor. Minor irrigation projects include both surface and ground water as their source, while major and medium projects exploit surface water resources alone. At the end of 1996-97, 'irrigation potential created' was 91.8 m.ha. as against 22.6 m.ha. in 1951. Of this major and medium irrigation contributed 33.8m.ha., or just 36.8 per cent. Assuming that all major and medium irrigation projects include large dams, at the most 21.9 per cent (59.52x36.8) of total production foodgrains in 1993-94 may have come from large dam based irrigation. Actual figure will be still less since all major and medium projects do not include large dams.

Assuming that most, not all, major and medium irrigation projects are dam-based, **the marginal contribution of large dams to increased foodgrains production is less than 10%.** (Data Source: CWC, 1996, Emphasis in original.)

(Prof. Nirmal Sengupta, MIDS, for WCD)

There is also a considerable view that large dams have led to a lop-sided flow of development resources to the neglect of rainfed areas which are the promising areas for future contribution to food production.

d) Deputy Chairman Planning Commission:

While the Green Revolution imparted dynamism to growth in the production of foodgrains, it remained confined to certain areas. Rainfed areas have been largely bypassed. In the Green Revolution areas also, there are stresses and strains, physical and environmental. A breakthrough in the case of crops like pulses and coarse grains is yet to come. Lack of balanced growth and skewed progress over regions in the case of agriculture and its sub-sectors continues. The overuse of chemicals in certain areas has had its adverse impact.

The development of high yielding varieties, specially of rice and wheat, and improved crop production technology, ushered in the Green Revolution, except in the rainfed areas. Much of the future gains in food production can be expected to come from increase in productivity in these areas. Rainfed areas, therefore, clearly merit the focused attention of agricultural scientists, administrators, extension workers, and all those concerned with allocation of resources.

(K.C. Pant, April 15, 1999, UNDP/World Bank/
Institute of Economic Growth Seminar)

e) Regenerative Agriculture:

See also new approach to food production by Datye and others cited later, which commands the need to rely more on regenerative agriculture

4. Dams have improved Environment

The Majority Judgment

Environmental and ecological consideration must, of course, be given due consideration but with proper channellisation of developmental activities ecology and environment can be enhanced. For example, Periyar Dam Reservoir has become an elephant sanctuary with thick green forests all round while at the same time wiped out famines that used to haunt the district of Madurai in Tamil Nadu before its construction. Similarly Krishnarajasagar Dam which has turned Mandya district which was once covered with shrub forests with wild beasts into prosperous one with green paddy and sugarcane fields all round.

So far a number of such river valley projects have been undertaken in all parts of India. The petitioner has not been able to point out a single instance where the construction of a Dam has, on the whole, had an adverse environmental impact. On the contrary the environment has improved. That being so there is no reason to suspect with all the experience gained so far, that the position here will be any different and there will not be overall improvement and prosperity. It should not

be forgotten that poverty is regarded as one of the causes of degradation of environment. With improved irrigation system the people will prosper.

Views of others

Let us first look at two specific dams: Periyar and Indira Gandhi Canal

a) Periyar Dam

The Periyar basin is densely populated with a population of 14,481 which means there are 274 people in every square mile. The catchment area is 528,000 hectares (ha). Domestic effluents ... pollute the river to varying degrees. The river is a mobile garbage dump of urban waste including hospital waste.

Pesticides also find their way into the river through agricultural runoffs because the upstream and catchment area are intensely cultivated. ... The deadly impact of these chemicals can be seen in the destruction of several types of fishes and aquatic organisms in recent year.

The river has dried up in stretches like the downstream of the Idukki dam where the tail race is being diverted to the Muvattupuzha river.

Nowadays, the water level sometimes goes down to such an extent that normal supply of drinking water from Periyar to Kochi and other neighbouring area is disrupted.

..... a 'Save Periyar Plan' was initiated in 1989 by the then Ernakulam collector, K.R. Rajan.

..... there was a change of government in the state and subsequently, in the district administration. As a result, the meticulously worked out plan to supply clean drinking water, and save the river was not implemented.

The Periyar Action Plan submitted by the district administration to the state government states, "the presence of aquatic vegetables on the river bank proves that the river has died".

Experts from the Centre for Water Resources Development and Management (CWRDM), Kozhikode, say the river

can be protected only if the various reservoirs that have been constructed along the course are opened to permit a free flow of water in the river. ... citizens are worried about the fate of the latest action plan to save the Periyar, as the state government is hard-pressed for funds.

*(Fifth Citizens Survey of Environment,
Centre for Science and Environment)*

b) Indira Gandhi Canal

"The Chief Engineer of the Punjab's Public works Department (Irrigation), A.M.R. Montagu declared in 1946 that "Heroic measures are essential if the Punjab is not to be destroyed [by waterlogging and salinity]. After reviewing the documents on waterlogging from the late 19th century through the 1960s, Michel concludes his study with a question: If India deals with its severe environmental problems in the Indus Basin by replacing spoiled Punjab land with "new" lands in Rajasthan – viewing the drainage costs in the Punjab as prohibitive – then "what will India do when the Rajasthan lands, in turn, become salinized or even waterlogged?"

HYV wheat and cotton crops are unable to grow on monsoon rain alone; they require the steady flow of water that the canal provides. However, the geophysical characteristics of the desert render it incapable of absorbing large quantities of water. Although some water is absorbed by the plants, most drains into the ground. Indian agencies and U.N. Food and agriculture organization have determined that large regions of the desert have gypsum hardpan close to the surface, such that high volume water supplies cannot percolate down into the ground aquifers from all points. In many places, the water hits hardpan and raises the groundwater tables. With no places to go, the water can only come up, until it hits the surface. When it does, soils become salinated and swampy, and land becomes unproductive.

To date, nearly 20% of the Punjab's farmland has been affected by waterlogging and salinity; the figure for neighboring Haryana is 15%. In the Southern district of Rajasthan, in Chambal, waterlogging affects 32% of irrigated farmland. Though irrigated agriculture is more recent in IGNP

compared to these other zones, stage I of the project has the largest percentage of land affected: 34%. Furthermore, the average annual rise in its underground water tables is 54% higher than around the Gang canal and 20% higher than the Bhakra command area, both small systems in north Rajasthan. The Command Area Development Agency (CAD) reported in 1990 that "It is clear That the rise in water levels in IGNP command ... is at an alarming rate." Already more than 600,000 hectares of prime land in Punjab, Haryana, and Rajasthan are waterlogged and over the next 20 to 40 years, much more than three million hectares will be critically affected, according to the World Bank. These figures suggest that in the not very distant future, Rajasthan, the Punjab, and Haryana — the major farm product providers of India — will be facing an ecological crisis, with inextricably linked social and economic consequences.

In the areas of intensive irrigation in stage I of IGNP, water tables are rising precipitously. Anupgarh, Suratgarh, and (less so) Lunkaransar regions represent the core production sites on which the success of the canal has been measured; in fact, yields in these areas for groundnut, mustard, and cotton are among the highest in India. Yet, Rajasthan's groundwater department predicts that 34% of this prime agricultural land will be "critically affected" by waterlogging and /or salinity within the next ten years." In 1952, the watertables were 150 feet deep in the town of Anupgarh and 120 feet deep in its surrounding area; now watertables are 40 feet deep and the rate of increase has sped up. "This whole place will be waterlogged in twenty years," an Anupgarh canal engineer projected. Already, most wells are pumping up water too saline to drink.

Though much of the worst consequences of waterlogging have yet to be documented, it is clear that the canal command area is on the verge of an ecological crisis. If this analysis is correct, then two alternatives exist: Either the state can follow the World Bank's advice and build a drainage canal, or it can do nothing.

The first alternative involves constructing a long, horizontal drainage canal that will either lead into large evaporation ponds

somewhere south in the desert, or continue on to the Arabian sea through Gujarat. Because the salinity in these drainage waters is equal to ocean water, it has to be drained away from farmland and subsurface aquifers. Although the sea-draining option makes more sense from a technical standpoint (that is, it theoretically avoids the problem of dumping wastewater onto land), economically it means a longer canal system than the IGNP itself promises to be many times more expensive. Either way, a drainage system covering three water-damaged states and a fourth thoroughfare state (Gujarat) will cost an out-of-this-world Rs. 50,000 to 75,000 per hectare. For the estimated three million hectares in need of drainage for the economic survival of India's "bread basket," the Bank's proposed "Northwest Drainage canal" (NDC) may cost as much as \$9 billion dollars. Though this price tag seems ludicrous, a World Bank official in charge of this project assured me that within 20 years, India will have no other choice; its "future" depends upon it."

(Extracts from "There's A Snake On Our Chests":
State and development Crisis in India's Desert.
By Michael Robert Goldman, Oct 1994.)

c) India's Country Paper, to The World Commission on Environment and Development (WCED), 1988

India had lost a staggering 9.5 mha of forest cover in the past decade alone and that the **"resulting loss of vegetative cover has increased the incidence of droughts and floods – the two common catastrophies in India.....** While some of the damage was caused by pressure for agricultural lands, fuel and fodder, **"a big source of destruction/denudation", of the vegetative cover were "the development projects, as for example, power, major irrigation, industry", etc.** (Government of India)

(emphasis added)

d) Centre for Science and Environment (CSE), 1987

Between 100 million to 150 million hectares of India's land area is rapidly turning barren and 1 million hectares of

croplands and grazing lands are badly affected. Official figures claim current afforestation rates of about 1.5 million hectares. But real afforestation may not even be a third of that.

The Green Revolution pulls out more plant nutrients from the soil than it puts back. Ludhiana district, which records the highest yields of many crops, now also records the highest deficiencies of plant micronutrients in its soil. Many farmers have already started applying zinc, iron, copper and manganese deficiencies are not far behind.

Between a quarter to a half of the lands brought under irrigation can go out of cultivation permanently because of soil salinity and water logging.

The flood-prone area has doubled over the last ten years from 20 million to 40 million hectares. And millions of people have been displaced and uprooted.

e) A. Vaidyanathan, 1999

Concern over environmental aspects has been heightened by (a) the unexpectedly high, and in some cases alarming, rates at which reservoirs are silting up; (2) the direct effect that construction of large reservoirs has on the immediate environment (the submergence of economically and ecologically valuable forests as well as the displacement of people living in the area); (c) fear of over-exploiting groundwater; and (d) damaging cultivated land by indiscriminate irrigation. The environmentalists have marshalled a great deal of information on these aspects. Although the accuracy of the estimates may be open to question, and one has to guard against environmental fundamentalism, there is little doubt about the importance of the issues raised by environmentalists. The processes of environmental degradation are so prolonged and their consequences manifest themselves so slowly that they are dangerously easy to ignore or dismiss.

The environmental aspect of water resource development and use must therefore receive much greater attention in the future. It appears entirely sensible to insist that measures to

check deforestation of upper catchments and go restore forest cover to an appropriate density must be an essential and integral part of planning for irrigation projects.

One way of generating a greater sense of seriousness is to insist, as a precondition for considering all proposals or new irrigation works, that the project design state the conditions of the catchment and propose concrete programmes to remedy deficiencies.

f) World Commission on Dams (WCD), 2000 (based on a study of a large number of dams worldwide)

Ecosystems and Large Dams

From the WCD knowledge Base it is clear that large dams have led to:

- ★ the loss of forests and wildlife habitat, the loss of species populations and the degradation of upstream catchment areas due to inundation of the reservoir area;
- ★ the loss of aquatic biodiversity, of upstream and downstream fisheries, and of the services of downstream floodplains, wetlands, and riverine, estuarine and adjacent marine ecosystems; and
- ★ cumulative impacts on water quality, natural flooding and species composition where a number of dams are sited on the same river.
- ★ The Commission found that reservoirs sampled so far by scientists all emit greenhouse gases, as do natural lakes, due to the rotting of vegetation and carbon inflows from the catchment. The scale of such emissions is highly variable. Preliminary data from a Case Study hydropower dam in Brazil show that the gross level of these emissions is significant, relative to emissions from equivalent thermal power plants. However, in other reservoirs studied (notably those in boreal zones), gross emissions of

greenhouse gases are significantly lower than the thermal alternative. A full comparison would require measurements of the emissions from natural pre-impoundment habitats. More research is needed on a case-by-case basis to demonstrate the capacity of hydropower to offset climate change.

- ★ Efforts to date to counter the ecosystem impacts of large dams have met with limited success due to the lack of attention to anticipating and avoiding such impacts, the poor quality and uncertainty of predictions, the difficulty of coping with all impacts, and the only partial implementation and success of mitigation measures. More specifically:
- ★ It is not possible to mitigate many of the impacts of reservoir creation on terrestrial ecosystems and biodiversity, and efforts to 'rescue' wildlife have met with little long-term success.

g) Environment and Social Impacts of Large Dams: The Indian Experience (Summary Report, 2000) for WCD, Indian Institute of Public Administration

The process of environmental impact assessment has been subjected to political and administrative pressures almost from the start. Pressure is brought upon the professional project consultants to prepare EISs in a manner such that the project is cleared. Pressure is brought upon the EAC to recommend the clearance or rejection of projects. Also, the MOEF or the Government of India rejects recommendations of the EAC, without assigning any reasons.

A well-known case is that of the Tehri Project, in Uttar Pradesh. The EAC that considered the project was unanimous in recommending that the project should not be accorded environmental clearance (1990). However, despite that, the government decided to give environmental clearance without assigning any reasons for rejecting the advice of their own expert committee. In his submission before the Expert committee set up by the Power Ministry of the Government

of India to assess the rehabilitation and environmental aspects of the Tehri dam (1996-97), the then Secretary of the MOEF said:

"...that records indicate that the decision for conditional clearance of the Tehri project was taken not by the MOEF, which did not favour clearance, but at a higher level" (Tehri 1997, p. 104)

Similarly in the case of the Narmada (Indira) Sagar and Sardar Sarovar projects, the MOEF categorically stated in writing that the projects were not fit for according environmental clearance. Yet, at the highest level, the decision was taken to grant them conditional clearance with a *pari passu* clause.

In other cases, projects were initiated much before clearances were received. This served to pressurise the Government of India to clear the project as so much expenditure of public funds had already been incurred. Examples:

- ★ Rengali Project in Orissa where Rs.186.95 crores of the total estimated cost of Rs.233.64 crores had been spent till March, 1994, without any environmental clearance (CWC 1996)
- ★ Bargi Project in Madhya Pradesh where Rs.360.74 crores of the total estimated cost of Rs.566.34 crores had been spent by March, 1994, despite no environmental clearance (CWC 1996).
- ★ Jurala Project in Andhra Pradesh where Rs.123.18 crores of the total estimated cost of Rs.275 crores had been spent by March, 1994 without environmental clearance (CWC 1996).
- ★ Karjan Project in Gujarat where Dam had been completed, Right Bank Canal completed, Left Bank Canal 90% completed and Rs.222.80 of the total estimated cost of Rs.264.10 spent by March, 1994, without environmental clearance (CWC 1996).

- ★ *Tillari Project in Maharashtra and Goa where, by March, 1994, Dam was 86% complete, and the Maharashtra canals were 89% (LB), 65% (RB) and 88% (Link) complete. In Goa, 73% of the LB canal and 199% of the RB canal were complete. The expenditure was Rs.179.01 crores of the total approved cost of Rs.217.22 crores. All this without environmental clearance (CWC 1996).*
- ★ *Jayakwadi Irrigation Project in Maharashtra where the Malagaon Dam has been completed, Paithan RB Canal completed and Majalgaon RB Canal half completed till March, 1994, without environmental clearance (CWC 1996).*
- ★ *Mahanadi Reservoir Project in Madhya Pradesh, involving the Sondur Dam and Paithan High Dam, where Rs.337.54 crores had been spent till March 1994, out of a total estimated expenditure of Rs.1223.45 crores, without environmental clearance (CWC 1996).*
- ★ *Upper Wainganga Project in Madhya Pradesh where by March, 1994, the dam had been complete and the canals were nearly complete. The total expenditure was Rs.136.19 out of an estimated total of Rs.176.53 crores. No environmental clearance (CWC 1996).*

Far more serious is the inability of the MOEF to enforce compliance. A study done by a member of the EAC for dams, (Ashish Kothari) in 1998, states that:

"Data emerging from the records of the Government of India, collected by the regional offices of the MOEF, suggests that in a shocking 90% of cases, project authorities had not complied with the conditions which their projects had been cleared under".

"Our EAC assessed the state of monitoring and reappraisal of the dams cleared by the MOEF in the 1980s and 1990s. The most shocking fact that our EAC found was that,

despite being told of the huge scale of defaulting (that) was taking place, MOEF rarely took stringent action, indeed, on no occasion had it used its powers to halt construction and prosecute concerned officials even in cases of extreme violations of conditions".

The foregoing review throws up some unanswered questions (a) if it is true that the petitioner had failed to "point a single instance where the construction of a Dam has, on the whole, had an adverse environmental impact", surely our courts are not so completely insulated from glaring living reality that not a single such instance had independently come to their notice (b) since the petitioner had supplied details only about SSP which was the issue, then how come the Majority Judges nevertheless came to have in their hands a substantial list of 'unmitigated success' stories of large irrigation and other projects both from India and from foreign countries, which they have cited approvingly and which have vastly influenced their opinion as evident from their own composition and (c) even if such knowledge and facts did somehow come to them, why was the petitioner not confronted with that information at any stage during the seven year long proceedings? That knowledge figures only now in the final verdict. Did such a process, not subject the Bench to a avoidable self-imposed handicap? And, what about the interest of justice? Would it not have been better served by subjecting that acquired knowledge received by the Bench independently of the petitioner, to an open scrutiny as part of the proceedings instead of saving it exclusively to be revealed only in the final verdict.

5. Hydro power is eco-friendly

The Majority Judgement

The hydel power's contribution in the greenhouse gases is negligible and it can be termed ecology friendly. Not only this but the cost of generation of electricity in hydel projects is significantly less.

Views of others

a) Ninth Plan

Greater emphasis on hydro-electricity is important for the peak requirement. Hydro-electricity should also be preferred source

of energy. However, much of the hydro-electric potential tapped is located in the ecologically fragile Himalayan regional locations. Tapping this source, therefore, is fraught not only with hazards but is also much costlier as compared to thermal power.

b) World Commission on Dams

The emission of greenhouse gases (GHG) from reservoirs due to rotting vegetation and carbon inflows from the catchment is a recently identified ecosystem impact (on climate) of storage dams. A first estimate suggest that the gross emissions from reservoirs may account for between 1% and 28% of the global warming potential of GHG emissions. This challenges the conventional wisdom that hydropower produces only positive atmospheric effects, such as a reduction in emissions of carbon dioxide, nitrous oxides, sulphuric oxides and particulates when compared with power generation sources that burn fossil fuels. It also implies that all reservoir – not only hydropower reservoirs – emit GHGs. Consequently, reservoir and catchment characteristics must be investigated to find out the likely level of GHG emissions.

c) Department of Atomic Energy (DAE)

The principal failing of large hydroelectric plants is that they require the submergence of vast areas of land and a consequent loss of forests, that are already dwindling rapidly. (There is also the related social problem of the rehabilitation of the people who live in the area that has to be submerged). The Chief Forest Conservator of the State of Karnataka has estimated that “..... in the case of all the hydel projects the forest area cleared is 18.6 hectares per MW of electricity. In the case of Kaiga (nuclear power plant) it is 0.06 hectare per MW hence, if we accept that power generation is a necessity, a forester from the point of view of conservation of forests would opt for nuclear power rather than hydel power”. In a recent issue of the DAE publication “Nuclear India”, other environmental problems associated with large hydroelectric plants are listed. These include earthquakes induced by large

reservoirs, sedimentation, loss of water, the receding of deltas and estuaries, and an increase in the incidence of diseases like malaria and fluorosis.

(DAE publication Nuclear India (Vol. 26, No. 6, 1988)
— (Cited in Science in India and its Publics: The Case of Nuclear Power, Dr. Shobha Raghuram.)

6. Higher electricity consumption is an indicator of progress in living standards

The Majority Judgement

One of the indicators of the living standard of people is the per capita consumption of electricity. There is, however, perennial shortage of power in India, and, therefore, it is necessary that the generation increases. The world over, countries having rich water and river systems have effectively exploited these for hydel power generation. In India, the share of hydel power in the total power generation was as high as 50% in the year 1962-63 but the share of hydel power started declining rapidly after 1980. There is more reliance now on thermal power projects. But these thermal power projects use fossil fuels, which are not only depleting fast but also contribute towards environmental pollution. Global warming due to the greenhouse effect has become a major cause of concern. One of the various factors responsible for this is the burning of fossil fuel in thermal power plants. There is, therefore, international concern for reduction of greenhouse gases which is shared by the World Bank resulting in the restriction of sanction of funds for thermal power projects.

(emphasis added)

Views of others

a) Author

The notion that higher electricity consumption is an indicator of progress in living standards is obsolete. It was assassinated in 70's when the oil crisis shook the world. Since then in the past 25 years all thinking on development, its indicators of progress have changed radically. They rest on minimisation of consumption of energy per unit of output, as also minimisation of infrastructure and waste of materials per

unit of output (Industrial Metabolism, United Nations University, 1994).

There are also illuminating papers by several Indian authors and scientists. [1]

(Poverty, Environment and Development — A view from Gandhi's Window, L.C. Jain, EPW February 13, 1998 and Industrialisation: A New Testament, L.C. Jain, Economic Times, December 9, 1994)

b) The Nehru-Gandhi Polarity in Economic Policy, Prof. Raj Krishna

India started with the priori belief that strength lay in increasing production and consumption of power, a belief which, in after years, became dogma: there can be growth, if and only if, there are increasing inputs of electricity.

India's development strategy in the 50's rested on this notion, which was in fact the ruling belief at the time the world over.

(Lecture at Nehru Memorial Museum, Nov. 15, 1977)

c) World Commission on Environment and Development (WCED), 1988:

An unenviable situation would arise if in the sphere of "energy consumption and supply patterns", the "existing policies and institutions remain essentially unchanged".

d) Alternative Approach to Energy Planning:

A.K.N. Reddy and Girish Sant argue that the approach to energy is undergoing a basic change, and that from a preoccupation with energy consumption as an indicator of development, there is a need to shift to a new paradigm of energy services, namely, development-focussed, end-use-oriented, service-directed, or DEFENDUS paradigm, to avert the impending crisis. From this point of view Reddy and Sant are strongly in favour of a combination of demand management, energy-saving and low-cost decentralised options on the supply side. In their view, such an approach would bring down the magnitude of projections of demand and reduce the need for investments in mega-projects for centralised generation, these being regarded as projects of the last resort to supplement other measures on the demand and supply sides.

e) New Approach to Agriculture and Energy

K.R. Datye, a former Maharashtra engineer and well-known consultant, has also advocated the idea of integrating the main storage and local storages as part of an elaborate alternative system of water and energy management and a new approach to agriculture. This includes a transition from a dichotomy between irrigated high-input agriculture and rainfed agriculture relying mostly on organic inputs to an integration of the two; a concept of regenerative agriculture and increased aggregate biomass productivity; a proper pricing policy to ensure better cost recovery from water users, which will result in greater efficiency in water use and the extension of benefits to areas not served at present; the integration of agriculture, forestry, horticulture, dryland and irrigated crop production, as also the integration of local water resources through watershed development and large canal projects, in a regenerative production system which uses external inputs to raise the primary productivity of an eco-system; a philosophy of 'energy self-reliance' at all levels from small communities to regions under which the coal replacement value of the locally produced biomass (and biomass products) exceeds the value of the external energy inputs needed for irrigation and agriculture development; and so on. Datye envisages the application of this approach not merely to new projects to be taken up in the future but also to existing projects through a redesigning and re-phasing of such projects.

(emphasis added)

The above extracts (d) and (e) are from the Report of the Five Member Group: FMG, set up by the Ministry of Water Resources in 1993 to discuss various issues relating to the Sardar Sarovar Project. This report was before the Supreme Court Bench in the instant case.

f) Impact on living standards of the poor

Even if we were to hold in esteem the old notion namely that consumption of electricity is an indicator of living standards, the real life record does little credit to our faith in its ability to lift the living standards of those who are in desperate need of such uplift:

and ecosystems. These impacts are complex, varied and often profound in nature. Because the ecosystem impacts are many and complex it is hard to give a precise and detailed prediction of the changes likely to result from the construction of a dam or series of dams.

- The construction of a storage dam and subsequent inundation of the reservoir area effectively kills terrestrial plants and forests and displaces animals. As many species prefer valley bottoms, large-scale impoundment may eliminate unique wildlife habitats and affect populations of endangered species. Efforts to mitigate the impacts on fauna have met with little success. Construction of irrigation infrastructure may have similar impacts.
- Storage dams are intended to alter the natural distribution and timing of stream-flow. They compromise the dynamic aspects of rivers that are fundamental to maintaining the character of aquatic ecosystems. Natural rivers and their habitats and species are a function of the flow, the quantity and character of the sediment in motion through the channel, and the character or composition of the materials that make up the bed and banks of the channel. The defining river discharge includes both high- and low-flow elements. These dynamics, not the average conditions of controlled dam operations, determine a stream's physical foundation, which in turn ensures ecosystem integrity.
- Storage dams, particularly hydropower peaking plants, can significantly disrupt the whole flow regime, resulting in both high seasonal and day-to-day fluctuations that differ greatly from natural flow levels. The construction of Glen Canyon dam on the Colorado River in the United States reduced daily average flows during the annual September peak from about 2000 m³/sec to about 700 m³/sec. In addition, streamflow can fluctuate

daily more than 425 m³/sec due to dam releases for electricity generation during the peak day time demand periods. These changes in flow have dramatically altered the riverine environment, creating consistently colder temperatures due to release of water from the bottom of the reservoir. A general decline in native fish abundance in the Colorado River is attributed specifically to the cold-water release from large dams there. The population of the fish *Tandanus tandanus* in Australia's Murray River disappeared due to short-term fluctuations in water level caused by reservoir releases in response to downstream water user requirements.

- Efforts to date to counter the ecosystem impacts of large dams have met with limited success owing to the lack of attention to anticipating and avoiding impacts, the poor quality and uncertainty of predictions, the difficulty of coping with all impacts, and the only partial implementation and success of mitigation measures.

b) Precautionary Principle and Large Dams: (Report of WCD 2000)

The United Nations Conference on Environment and Development adopted the Rio Declaration on Environment and Development in June 1992. The Declaration contains 27 principles, usually known as the Rio Principles. Several of these are of immediate relevance to water and energy resources management.

Principle 15 states that the **precautionary approach** shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Often these communities do not have access to information on the nature of the risks that they face until the project is approved or completed. The case of future generations and the

ecosystem is somewhat different. These 'risk bearers' cannot speak for themselves, even if the risks they face are acknowledged. Future risks can be linked to present risks. The loss of natural resources can undermine livelihood opportunities for both current and future generations. Similarly, the loss of biodiversity in the present means that it is either not available or diminished for future generations. The lower priority generally accorded to these types of risks is compounded by the absence of tangible safeguards, or the failure to implement and enforce those that do exist. **In such cases, as with other involuntary risk bearers, adopting a precautionary approach is particularly relevant in order to avoid impacts.** It is also essential to identify appropriate inputs by interested parties to the options assessment process and to the planning and project cycles.

The 1992 Earth Summit in Brazil established the critical link for all countries between a healthy environment and economic development, refuting the idea that this is only a luxury for rich countries.

Decisions value ecosystems, social and health issues as an integral part of project and river basin development and prioritise avoidance of impacts **in accordance with a precautionary approach.**

The **precautionary approach** is also relevant to risk management. Determining what is an acceptable level of risk should be undertaken through a collective political process.

However, decision-makers faced with scientific uncertainty and public concerns have a duty to find answers as long as the risks and irreversibility are considered unacceptable to society. **A precautionary approach** therefore entails improving the information base, performing risk analysis, establishing precautionary thresholds of unacceptable impacts and risk, and not taking actions with severe or irreversible impacts until adequate information is available, or until the risk or irreversibility can be reduced, making outcomes more predictable. Normally the burden of proof will be on the developer

*Strategic impact assessments provide an initial level of screening to remove alternatives that have unacceptable social and environmental consequences. They need to reflect the importance of avoiding adverse impacts and the **precautionary approach.***

*Comprehensive Options Assessment: The investigations were analysed on a river-basin-wide understanding of social, economic, and environmental values, requirements, functions and impacts including cumulative impacts, and **the precautionary approach** was applied. (emphasis added)*

(Report of WCD, 2000)

If there is a doubt, surely the benefit of the doubt should go to upholding the Precautionary Principle rather than drowning it. Precautionary principle does not obstruct action but it places the economic and legal burden and responsibility squarely on those wanting to act and requires that before being allowed to proceed, they first provide proof that due precautionary measures are available, reliable, feasible and undertake the requisite obligation including cost.

IV

“Dam is the only solution”: Majority Judgement

Notwithstanding the policy statement of the Prime Minister cited earlier, the Majority Judgement has accepted and endorsed the proposition that **dam is the only solution** to Gujarat's needs of water specially drinking water. In so doing it has also gone against the facts of the case. For example, that the dam is the only solution for its drinking water needs was certainly not the position of even the Gujarat Government before the Tribunal. Gujarat had told the Tribunal that:

As regards domestic water requirement of villages in the command area of Navgam Canal “this requirement is not added here as these villages will be able to get sweet water supply from the underground water resources built up by continued irrigation or by seepage from village tanks which can be fed by the proposed Narmada Canal during period of surplus flows in canal”

(emphasis added)

Gujarat pressed its case before the Narmada Water Disputes Tribunal not only on the grounds of general drought-proneness of the state but in particular the imperative of alleviating the acute drought-affliction of Kutch, Saurashtra and North Gujarat. But after the Tribunal gave its Award in August 1978 and allocated 9 MAF to Gujarat as its share in Narmada Waters, it gave the lowest share to the most needy areas.

For example, against 9.45 lac acre of land which was to be irrigated in Kutch, Gujarat allotted it water to irrigate only 0.94 lac acre of land in Kutch, i.e., 10 percent of the demand. Just hold your breath and see what proportion of the actually drought-afflicted areas remain excluded from the command of SSP:

“Dam is the only solution”: Majority Judgement

55

Cultivable Areas “left out” of the SSP Command:

- 98% of Kutch;
- 91% of Saurashtra; and
- 82% of North Gujarat

The areas included in SSP command by different regions are:

Areas Proposed for Irrigation

	Area (Lakh Hectare)	%
Central Gujarat	9.04	50
- Ahmedabad	3.30	
- Gandhinagar	0.10	
- Vadodara	3.40	
- Bharuch	0.98	
- Kheda	1.16	
- Panchmahal	0.10	

Areas Proposed for Irrigation

	Area (Lakh Hectare)	%
North Gujarat	4.63	26
- Banaskantha	1.50	
- Mehsana	3.13	
Saurashtra & Kachch	4.23	24
of which:		
- Surendranagar	3.04	(1.75)
- Bhavnagar	0.48]	
- Rajkot	0.34] (1.19)	(6.5)
- Kachch	0.37]	
Total (Say 18 Lakh hectare)	17.90	

Gujarat Government's rationale for the above pattern of allocation of Narmada waters within the state is explained in “Sardar Sarovar Project: What it is and What it is not” (September, 1991):

Drinking Water:

It has never been claimed that all the areas under Saurashtra, Kutch and North Gujarat will be covered. We are aware that large areas are left out but we have tried to give maximum benefit to these regions by providing drinking water supply to all the areas which are in the command and also to areas outside the command in these 3 regions. This is a big gain for these areas.

Irrigation:

As regards irrigation facilities to the areas left out of the Narmada Command, the optimum development of water resources in these areas, by all feasible schemes, including surface schemes, ground water and check dams and harvesting of water in the fields which would also recharge the ground water and counteract salinity are the only measures left.

*The limits of the command area of the SSP have been determined on the basis of the alignment of main canal, which has to run on falling contour to cover maximum area under gravity irrigation, Maximum area, which can be commanded from this canal by gravity, has thus been included for providing irrigation facilities.**

This strategy is reiterated by Gujarat Government in the SSNNL publication 'Facts':

"As per the compressed schedule of the Sardar Sarovar Project, it has planned to cover Saurashtra and Kutch also within 10 years. At the same time, there is no ban to go ahead with the smaller water conservation projects which would also form part of the integrated approach wherein we go for all possible projects including major, multipurpose, medium, minor, tubewells, private tubewells, check dams, soil conservation projects simultaneously. There is also a special priority given by the

* Some experts do not accept this explanation. They hold that both the Saurashtra and Kachch Branch Canals are lift canals. By providing higher lifts, more water could be commanded.

Government of Gujarat to the projects other than SSP in the non command areas of the SSP."

Proceeding on the basis of the aforesaid declared strategy and "the only means" for optimum development of water resources for the benefit of 'the areas left out of the Narmada command', the FMG tried to find out what financial resources were planned to be deployed for developing the 'only means'. In its 1994/1995 reports, it apprised the Government and the Supreme Court of the factual position:

"It may, therefore, be reasonably expected that such measures ("the only means") would find adequate place and provisions in Gujarat's 8th Five Year Plan, 1992-97; and indeed the preliminary statement of Approach to Development in the State's 8th Plan document records high priority and promises massive support to such measures; The diverse soil and water regions of Gujarat will be provided massive support through a high priority programme of watershed development, tank construction and improvement of other traditional water development systems, completion of field channels and modernisation of lower level canal systems, improved ground water extraction and lift irrigation schemes".

(emphasis added)

*"However, the actual outlays proposed do not seem to reflect this. The Plan document says that **the limited provision is on account of prevailing financial crisis and availability of very limited funds**".*

(emphasis added)

The same plan document also throws light on why the availability of funds is very limited for such (minor irrigation) schemes, though they are accorded "high priority" and promised "massive support". It says the strategy of the Plan is to "provide maximum resources available for SSP". In the State's 8th Plan, (1992-97), Rs.2,900 crore are committed to SSP; another Rs.310 crore for continuing schemes of other major and medium irrigation projects. The provision for minor irrigation is Rs.232 crore, of which Rs.225 crore

is for continuing schemes - and Rs. 7 crore for new schemes of minor irrigation in the entire 8th Plan period.

“One of the most disturbing elements in the finances of State Governments is the increasing revenue deficit, the financing of which is often done by relatively high cost borrowed funds. This phenomenon, if unchecked for years, would eventually lead to unsustainable levels of debts and also progressively reduce the availability of resources for capital investments”.

The pre-emption of a relatively large portion of revenue receipts for meeting the growing non-plan non-developmental expenditure would imply that State Governments would have to undertake larger borrowing for meeting the investment requirements of (Plan) social and economic infrastructure”.

(‘Finances of State Governments 1994-95; Reserve Bank of India Bulletin, October 1994’).

According to the latest RBI review of State Finances 1999-2000 (and Central finances), read with the Report of the Eleventh Finance Commission for 2000-2005 and the Ninth Plan, the situation has worsened. There is a steep decline in the availability of capital resources for further investment on development:

Ninth Plan

A disturbing development in recent years is the inability of the States to mobilise resources as targeted leading to a short-fall in the share of States in total Plan outlay. The share of the States in the Eighth Plan was only 36.4 per cent as compared to the projected share of 41.5 per cent.

This in turn focus attention on the growth of non-plan expenditure in the States and the very large increase in losses in sectors such as electricity, irrigation and road transport which seriously erodes States’ resources.

Reserve Bank of India

The revised estimates available for twenty-four States for 1999-2000 reveal significant stress in State finances.

“Dam is the only solution”: Majority Judgement

The revenue deficit for 1999-2000 overshot its projected level by 42.0 per cent to Rs. 56,815 crore accounting for almost 92 per cent of the rise in GDF.

The consolidated revenue expenditure of twenty-four States showed a growth of 23.4 per cent in 1999-2000 over the previous year. The major component which has contributed to the excessive growth in revenue expenditures has been non-Plan expenditure. This segment of expenditure which mainly comprises wages and salaries, pensions and interest payments constitutes around 82.0 per cent of revenue expenditure and absorbs a major portion of revenue receipts causing a persistent rise in the fiscal deficit.

On the expenditure front, given its committed nature, the non-developmental expenditures would rise by 13.5 per cent in 2000-01 on top of the rise of 27.4 per cent in 1999-2000 and would account for 36.0 per cent of the budgeted aggregate disbursements.

This would result in reduced flow of resources towards States’ capital outlays and social sectors.

The share of social and economic expenditures in total disbursements has declined from 65.7 per cent, on an average, during the 1990s, up to 1998-99, to 59.3 per cent in 1999-2000 and is budgeted to decline further to 58.3 per cent in 2000-01.

The combined gross fiscal deficit of Centre and States increased to 9.9 per cent of GDP (Rs. 1,93,471 crore) during 1999-2000 as against 8.9 per cent of GDP (Rs. 1,56,928 crore) in 1998-99.

Expenditure allocation across various sectors shows that growth in non-development expenditure has outstripped that of development expenditure.

The share of development expenditure in total expenditure of the Government sector has been showing a decline since the beginning of the 1990s; it fell from 60.3 per cent in 1990-91 to 50.8 per cent in 1999-2000. The budget estimates

for 2000-01 place the share of developmental expenditure still lower at 49.1 per cent.

With the growing size of the combined fiscal deficit, the Government sector's draft on resources from domestic saving has increased significantly in recent years. The share of market borrowings in total resources for financing fiscal deficits of Centre and States rose to 44.2 per cent in 1999-2000 from 19.7 per cent in 1990-91.

The Eleventh Finance Commission

We undertook a review of the current trends in the finances of the Union and the State governments. As indicated briefly in the Interim Report, the picture that emerged is a matter of deep concern. The secular decline in the fiscal balance of the economy that had set in during the eighties, marking the transition of a revenue surplus economy to one of deficits, to which pointed attention was drawn by the Tenth Finance Commission, has not only persisted but got accentuated in the closing years of the nineties, with some of the key deficit indicators climbing to unprecedented "highs".

With both the Centre and the States resorting to borrowing over the last two decades to finance even a part of their current expenditure, the level of indebtedness of the government has gone up significantly and stood at a little above 65 per cent of GDP in 1999-00.

Domestic debt growth continued to outpace growth in GDP in the nineties as well (15.2 per cent as against 12.5 per cent), pointing to the unsustainability of the fiscal deficits

Gujarat's Finances

(a) ADB study of Gujarat's Finances (1999) says:

- Current expenditures are outpacing revenue growth;
- Non-development expenditure is growing faster than the development component;
- Current expenditure is crowding out capital expenditure;

- The fast growing downward sticky items such as wages and salaries, interest, subsidies and transfers have drastically curbed the state's allocative flexibility, and thus the state's control over expenditure priorities and effectiveness;
- The method of loan financing even a part of its revenue expenditure has imparted a feedback process in: (1) revenue expenditure growth via rising interest liability; and (2) debt building-up via shrinking net availability of fresh loan.

(b) Reserve Bank: Gujarat State:

	(Rs. in crore)		
	1978-98	1998-99	1999-2000
Revenue Receipts	11,125	13,123	13,984
Revenue Expenditure	12,143	15,052	15,394
Capital Receipts	3838	5123	4794
of which internal debt	507	1057	881
Capital Expenditure	2731	3514	3874
of which irrigation	1261	1615	1361

(c) Centre for Monitoring Indian Economy (Public Finance, 2000)

Gujarat	(Rs. Crore)	
	1993-94	1999-00
Expenditure on soil & water conservation	1.77	8.24

Imagine a largely drought stricken state spends a measly sum of Rs. 8 crore annually on the most vital safeguard, namely, soil and water conservation. Undoubtedly, most of this goes to staff salaries which have risen by leaps and bounds in the recent past.

The estimated financial needs of Sardar Sarovar which were Rs. 6,400 crore in 1998 when it was approved, had doubled to Rs. 13,000 crore in 1993 at 1990-91 prices. At 1999-2000 prices it

could be an estimated Rs. 20,000 crore. Let us say SSP will take another 10 years to be completed; by that time the cost may rise to closer to Rs. 30,000 crore. These are broad estimates.

Given the declining resource availability for capital investment (Centre/States combined) it is difficult to see how the required volume of cash will come via the budget. And if the proportion of market borrowings, which are necessarily high cost, is raised, it will have a predictable bearing on its financial viability. The speed of completion of the project may be impeded by availability of requisite resources within the 10-year period envisaged. But that is not our main worry – what worries is the availability of funds for developing the potential of ‘other means’ to provide water for drinking and irrigation.

With SSP commanding practically the bulk of the State’s allocation for Irrigation, what is left in the State kitty to fund even the minimum needs of the ‘left out areas’ for drinking water let alone irrigation? What will suffer most are the short gestation options, low cost works which are “the only measures left” (such as “surface schemes, ground water and check dams and harvesting of water in the fields which would also recharge the ground water and counteract salinity”) as per the Gujarat Government.

Similarly, with reduced attention and allocation for existing irrigation and water supply infrastructure, these facilities are facing neglect and deterioration. Most dams in Saurashtra are in silted up condition today and little funds are allocated for their maintenance and desilting, thus, reducing the benefits from available infrastructure. Similarly, due to uncontrolled exploitation of groundwater and damming of rivers, the salinity intrusion along the long Saurashtra and Kachch coastline is destroying more and more available water resources.

The orders of the Majority Judgement to complete the construction of the dam at FRL 455 ft. **as early as possible**, may help the Dam project authorities to pressure the State Government to give priority to the financial needs of the project. Indeed, the 8th plan strategy of Gujarat was to “provide maximum resources available for SSP”. An unintended effect of that was to starve the areas left out of SSP command of even petty cash. In the circumstances, it is axiomatic that the drinking water and irrigation scarce areas of Gujarat which are “left out” from the command of Sardar Sarovar (98% of Kutch, 91 % of Saurashtra and 82 % of North Gujarat) must necessarily wait for 10 years, if not more, while SSP is underway.

A single large irrigation project sucking away most of the irrigation allocation in a state plan to the detriment of the bulk of areas of the state, is not an uncommon phenomena. Michael Goldman records that the Indira Gandhi Canal in Rajasthan which covers only 3 districts or less than 10 per cent of Rajasthan’s area “sucked critical resources from Rajasthan’s 23 remaining districts”.

We now come to the heart of our argument. If these are the only acknowledged measures left (such as all feasible schemes, including surface schemes, ground water and check dams and harvesting of water in the fields which would also recharge the ground water and counteract salinity for meeting the water needs of the left out areas, what is so peculiar about the areas falling within the command of SSP – that even a part of their water needs can not be met by similar measures as commanded by Gujarat for the left out areas, which would reduce the load of expectations and expenditure on the dam. But there is a catch here: if other measures are developed to meet even part of the needs then the argument that ‘dam is the only solution’ cracks.

Some views on other options:

- (1) A recent note (year: 2000) from **S.A. Char**, a former Director/Chief Engineer of the Central Water Commission (CWC) and Ganga Basin and former Executive Member of the Narmada Control Authority:

Owing to the higher cost of irrigation from major dams, alternative options such as the use of ground water, watershed and rainwater harvesting, tank and lift irrigation etc. should be considered to cover as much an area as feasible so that the cost of the major dams and their area spread may be minimised. The cost estimates and benefits from the proposed major dam projects should be scrutinised by independent experts.

The large dam projects constructed prior to 1975 in India and many of the developing countries were cost-effective to some extent. After the world oil crisis in the mid 70s, with the increase in fuel costs for operating construction machinery and in the manufacturing costs of cement and steel (which are energy intensive), the costs of construction of large dam projects with their canal systems etc. also increased significantly. The costs of land acquisition for these projects (both submerged and canal lands) also rose sharply.

The costs per hectare of irrigation, which was about Rs. 8,000 prior to 1975, rose to about Rs. 80,000 in the 1990s. The result of these as well as other factors like delays in construction, brought down the cost-effectiveness of new projects to near unacceptable levels.

Due to faulty planning, some of the mega-projects which could give benefits on stage-wise completion were not executed with such a thinking in mind. Huge public investments were tied up without the people getting any benefit for unduly long periods. The stage-wise benefits which could be given to the people were not given effect to despite precedents of getting such benefits elsewhere.

Major dams are not required in many cases for meeting the water requirements of communities. Small or medium dams/barrages can meet the drinking water needs of towns and urban areas. These should be encouraged wherever needed and feasible. Rainwater harvesting should be encouraged, not only for meeting the domestic and industrial requirements in urban areas, but also in rural areas for ground water recharging etc.

(emphasis added)

In areas, where recharging of ground water is needed, the harvesting or rainwater for this purpose appears a dire necessity. In parts of western India, water harvesting has been tried for rural areas along with watershed management and has had appreciable success unlike mega-dam projects which take a long time to give benefits, rain water harvesting fulfills immediate augmentation of water. This is specially needed for urban and industrial users. It is also cost-effective.

Dam projects involving submergence of forests with bio-diversity may not be taken up.

- (2) In 'Space Technology for Sustainable Development' (1996) **U.R. Rao** argues that "gross neglect of recharge and overexploitation of underground water resource has generally led to continuous dipping into the static water table in most places in the world. While increased irrigation of rain-fed land, particularly in the tropical regions, is absolutely essential for achieving higher yields, it is

important to recognise that ground water irrigation is roughly twice as efficient as surface water or canal irrigation. In other words, emphasis has to shift to the adoption of water conservation measures through construction of water harvesting structures such as small ponds, tanks, bunds and check dams, which can also form efficient recharging sites for developing adequate hydrological potential in each watershed."

- (3) An earlier proposal (1988) by **B.B. Vohra**, former Secretary Union Ministry of Agriculture and Irrigation, Founder Chairman of the Central Ground Water organization, and Environmental Protection Agency read as under:

Gujarat has a reported area of 18.83 mh constituted as follows:

	Area (mh)
1. Area under non-agricultural uses	1.09
2. Barren & unculturable land	2.68
3. Forests	1.88
4. Culturable wastelands	1.95
5. Fallow lands	0.98
6. Permanent pastures	0.85
7. Rainfed agricultural lands	7.35
8. Irrigated agricultural lands	2.05
Total	18.83

Of the above areas we may consider that at Sl. Nos. 1 & 2 to be not in need of any attention because they are incapable of any biotic production.

We may also assume that — as in the rest of the country — 50 percent of the forest area is under good tree cover and therefore not in need of any special attention other than protection against illicit fellings.

We may also assume that all the irrigated lands are well looked after.

These areas add upto a total of 6.76 mh, leaving a balance of say 12 mh of land which needs attention.

The total cost of restoring the State's land resources to good health is not likely to be more than Rs. 5,000 crores.

An investment of this nature will yield incomparably better and quicker results than the SSP is likely to do even after it is completed by about 2007 AD, by which time, according to a competent observer, its cost will have reached Rs. 15,000 crores+.

Even from the strictly narrow point of view of irrigation, such a programme will secure and significantly enhance the ground water resources of the State, which today serve a net area of 1.66 mh – out of a total net irrigated area of 2.05 mh. It may even result, over a period of years, in a doubling of the area irrigated by ground water in the state."

(4) Sardar Sarovar submerges smaller irrigation projects but

Little steps rejuvenate dry Saurashtra wells

(i) (The Economic Times, Ahmedabad, Monday, 4 January, 1993): The multi-crore Narmada Project has virtually submerged a number of small irrigation projects in Gujarat, if the status of various minor and medium schemes spread throughout the state is any indication. With the mounting cost of the Sardar Sarovar Project (SSP), the government has been pooling its resources. Schemes in the water-starved areas of North Gujarat and Saurashtra have either been scrapped altogether, or are being ignored.

(ii) Indian Express, Baroda, 24.8.1997: Today approximately 2.5 lakh wells out of the 7 lakh or so in the Saurashtra region are full of water, despite shortage of rainfall. All this is thanks to Shamjibhai Aantala, whose efforts at educating the public about water conservation and well-recharging have brought cheap benefits to thousands of farmers.

Aantala has used his experience and native intelligence for the benefit of farmers. He began small, making efforts to improve the lot of people living around his native Dhoraji.

+ This figure has gone upto Rs. 30,000 crores as mentioned earlier in this chapter.

This year before monsoon, he suggested to villages that they should make connection of nine inch pipe from nearby deeper rivers to their well. Farmers of villages like Nagar Pipaliya, Gondasara, Zaansar, Majewadi, and Goadhar adopted his suggestion and now they have no subject for worry about rain shortfall, because their wells are full, and they are even able to cultivate their land. A farmer in Majewadi village expressed his happiness in words “Shamjibhai is our godfather. He would never sit idle without completing his task of total well-recharging”.

Aantala's formula is very simple. All it costs is 20 paise per 1,000 litre of water. The farmer is asked to build a six-foot cuber water storage tank deep within the earth, or on sloped land. A nine-inch diameter cement pipe leads from the top of the tank to the well.

Rain water seeps into the ground from the tank and slowly recharges the well. The pipe aids the process. After two or three rain-showers, the well gets recharged, and the process continues.

((i) and (ii) above are extract from The River and Life – people's struggle in the Narmada Valley – Sanjay Sangvai, 2000)

(iii) Gujarat: Kutch, Saurashtra and North Gujarat – Some more examples of people's initiatives

- *Initiatives by Manubhai Mehta in Savarkundla Taluka in Amreli district to activate 1200 bandharas, 100 check dams and 33 man made lakes to improve water availability in 3500 otherwise barren tube wells.*
- *Mansukhbhai Suvagiya in Amreli and Junagarh district helped to build over 100 check dams over the last two years.*
- *Due to local harvesting efforts in village Devgadhi in Mendarda Taluka of Junagadh district, there is, what Times of India observed, an Oasis in drought hit Saurashtra.*

- In village Khapala in Bhavnagar district, almost entirely through people's efforts, over 200 check dams have been built over the last two years, easing the water problem.
- Recharging of some 300,000 wells in Saurashtra due to efforts by Shamjibhai Antala of Saurashtra Lok Manch (whom India Today called Rainmaker of Saurashtra)
- Initiatives by Development Support Centre in at least 50 villages in Saurashtra. There is little water crisis in those villages.
- Initiatives by Jan Vikas Ecology cell has led to reducing water crisis in at least twelve villages (for example, Khari village in Bhuj taluka) in Kutch.
- The work of Vivekanand Research and Training Institute (in Kutch) and Aga Khan Rural Support Program (in Saurashtra) is notable.

(South Asia Network on Dams, Rivers and People, Himanshu J. Thakkar)

(5) Bhagani Tildeh River Basin (Alwar district)

Ancient wisdom brings water to 550 parched villages

In 1986 the river basin of Tildeh river flowing through the western part of Rajgadh tehsil of Alwar district of Rajasthan (India) was marked as dark zone in government maps, signifying acute scarcity of water. Migration rate was very high.

About 250 sq. km area of this river basin falls in Sariska Tiger Reserve. Till about 60-70 years back, the river used to flow perennially. Following mining in the river catchment, deforestation and neglect of traditional water harvesting systems, not only river used to dry up in post monsoon months, but the groundwater level had gone deep down. Many people were forced to give up farming and cattle rearing and to take up wage rate work in the mines.

Seeing the impact of rebuilding of nearby village Gopalpura tank in 1986, people started thinking of taking up the issue of water scarcity in their own hands. In 1987 monsoon, people

took up construction of many small structures to harvest and store rainwater.

The first obstacle to their efforts came from the dept. of forests and wildlife of Rajasthan government. They sent notices to various people that the structures created by them were violative of forest and wildlife conservation acts. Without bothering about these legal notices, the people continued their efforts. Many false cases were filed against people, but people refused to stop their work.

The total area of Bhagani Tildeh river catchment is 500 sq km. In this area, a total of 250 water conservation structures, mostly small dams were constructed. In this process of dam building, the farmers chose such places for dam construction where farm land or forests were not going under submergence. If there was a chance of fertile agricultural land going under submergence, the structures were so designed that full cultivation was possible. To achieve this, the over flow and drainage systems were appropriately designed. In some places, to achieve full water harvesting, in stead of a bigger dam, two small dams were constructed. Thus people assured that in construction of these 250 johads, none of the cultivable or inhabited land was coming under submergence. No displacement was allowed to take place.

Similarly, for forest conservation, rotational grazing method was employed. Grazing by outside cattle herds (not belonging to the local village) was stopped and cutting off of green trees too was stopped. Rules for village people too were made, so that fresh grass would not be cut off and the cattle would get adequate food. Killing of forest animals by village people and by outsiders was stopped totally, leading to increase in no. of forest animals and general well being of the forests.

These minimum arrangements made by the village people lead to perceptible change in the area. Most important change was that an area where groundwater was deep and scarce, the groundwater level came up (from 200ft to 20ft) and all those wells that were dry earlier had year round water now. Not only that, the river itself became perennial at a number of places. The consumption of electricity and diesel for pumping

water from wells have reduced substantially. For irrigation of one bigha (1.75 bigha makes an acre) land, when earlier 10 litres diesel was consumed in pumping out water, now only 2 litres was required.

Due to availability of adequate water, the yields of food crops and milk has increased multi fold. Migration of people and cattle has stopped. In this whole area, forest, ecological, social and economical regeneration process has started. For this achievement, no displacement or outside intervention was necessary. People have achieved sustainable development by self-help and by conservation of nature. Even for generation of electricity required in the villages for lighting, a small dam of 6 mt high is sufficient.

Thus, in water harvesting and management, the only possible way of development is people based development. This option does not break the community and society, but binds them. This option not only regenerates land, water and forests, but also regenerates society.

(Tarun Bharat Sangh, Secretary Rajender Singh; and Alwar – Miracle Man, by Rohit Parihar, India Today 27.7.1998)

To conclude this Section, it is in the light of the aforesaid diverse albeit balanced and mutually reinforcing solutions advocated by various knowledgeable sources (and not a 'fundamentalist' approach as A. Vaidyanathan cautions,) that we can reflect on the unfortunate consequences of the headlong push the Majority Judgement has given for a single track pursuit of raising the dam to the height of 455 ft.:

As already seen, the State of Madhya Pradesh is keen for the reduction of the dam's height to 436 ft.

The Award of the Tribunal is binding on the States concerned. The said Award also envisages the relief and rehabilitation measures which are to be undertaken. If for any reason, any of the State Governments involved lag behind in providing adequate relief and rehabilitation then the proper course, for a Court to take, would be to direct the Award's implementation and not to stop the execution of the project. This Court, as a Federal Court of the country specially in a

case of inter-State river dispute where an Award had been made, has to ensure that the binding Award is implemented. In this regard, the Court would have the jurisdiction to issue necessary directions to the State which, though bound, chooses not to carry out its obligations under the Award. Just as an ordinary litigant is bound by the decree, similarly a State is bound by the Award. Just as the execution of a decree can be ordered, similarly, the implementation of the Award can be directed. If there is a short fall in carrying out the R&R measures, a time bound direction can and should be given in order to ensure the implementation of the Award. Putting the project on hold is no solution. It only encourages recalcitrant State to flout and not implement the award with impunity. This certainly cannot be permitted. Nor is it desirable in the national interest that where fundamental right to life of the people who continue to suffer due to shortage of water to such an extent that even the drinking water becomes scarce, non cooperation of a State results in the stagnation of the project.

The height of the dam has been bestowed the status of a categorical imperative.

Imagine the depth of the consequences flowing from that sought after height for the displaced humanity and environment, and worse still: there is bound to be a huge waiting period for the “left out areas” to get a drop of drinking water. While the Court has reiterated its deep concern for providing drinking water to the deprived people of the water scarcity areas of Gujarat, it has, ironically, even if unwittingly, accentuated and almost indefinitely prolonged the agony of large numbers of the inhabitants of the water scarcity areas.

For, the prospects of drinking water supply from the 455 ft. dam is neither as near nor as practicable as is being propagated. Alas, it has many organizational, technical/financial bridges to cross as pointed out by the Five Member Group (FMG) in its report. Consider the following extracts:

Drinking Water

A major benefit claimed for the SSP is the provision of drinking water to a large number of villages and urban centres. We take it that the present intention is

to cover 8214 villages and 135 towns; we need consider merely the implementation aspects.

Question is what precisely 'the provision of drinking water' means. It is clearly not the intention that the SSP itself would install and operate water-supply systems in all the 8214 villages and 135 urban centres which are to be covered. When it is stated that this project will provide drinking water to those villages and towns, what is meant is that the canal will carry the necessary water. Before this can actually become drinking water, there have to be off-take points, filtration and treatment to make the water potable, a delivery system (including pumping and pipelines), arrangements for pricing, billing and collections, and so on. There have to be agencies charged with the responsibility of doing all this, and the necessary funds have to be provided.

In the publication 'SSP What It Is and What It Is Not' (September 1991) Dr. C.C. Patel refers to the discussions held by the Sardar Sarovar Narmada Nigam Limited with the Gujarat Water Supply and Sewerage Board (GWSSB) and the State Industries Department on the subject of formulating detailed plans for utilising 1.06 MAF of Narmada waters for drinking water and industrial use purposes.

The publication proceeds to observe:

"Detailed demand statements and tapping points will be prepared by the GWSSB so that a project report is ready within about a year. This project would have to be implemented so that by the time the Narmada Canals reach the needy areas, the water supply scheme is completed and kept ready to draw the required quantity of drinking and industrial water to various regions in North Gujarat, Saurashtra and Kachchh."

The said publication is repeated almost verbatim in the NCA's publication 'Drinking Water from Sardar Sarovar Project' (December 1991: the later publication also adds that **the cost of the drinking water project "would run into several thousand crores"**).

(emphasis added)

In both the documents it was thus envisaged that a detailed project report on drinking water was to be ready in a year and implemented in time, so that by the time the canal reaches the areas, the drinking water supply system would be in a state of readiness to draw water.

Narmada water may reach the areas in question between 2000 and 2005 AD^λ. The physical infrastructure needed to draw it and provide water for industrial use and drinking water to the villages and urban centres mentioned earlier will need to be in place and operational in time. This synchronization aspect is very important. In so far as funding is concerned, perhaps large provisions will be needed in the 9th Plan^φ rather than in the 8th Plan, but beginnings will have to be made in the 8th Plan period itself.

One important point needs to be noted in relation to drinking water, namely the annual shut down period for maintenance purposes. The NCA publication referred to above puts this at "a month or so" whereas the SSNNL publication 'Planning for Prosperity' puts it at two and a half months (March 1 to May 15).

Whatever the period, it is clear that the canal will be shut down for a fairly long spell for annual maintenance. Precisely how the drinking water needs of the 8214 villages and 135 towns will be met during this

λ We are now already in 2001 and the possible period is 2003 to 2020 A.D.

φ We are already at the end of 4th year of 9th plan and the periods will appropriately change now.

period, needs to be indicated and necessary arrangements made.

The Ministry of Water Resources says:

“Work on Saurashtra Branch Canal from Km. 0 to 46 has already started and it is proposed to complete the branch canal and sub-branch canal by 1998 and distribution system by 1999. Work on Kutch Branch Canal is scheduled to start in 1994 and to be completed in 1999. Water will reach takeoff points on these canals accordingly.”

Putting these two together we get an indication that water may reach Saurashtra and Kutch around the year 2000 but if we take possibilities of time over-runs into account this may become 2005 or even later. In other words, we still need to consider how the drinking water needs of Saurashtra and Kutch will be met during the next ten to twelve years. Local water resource development (in situ, conservation, check dams, small local surface storages, percolation tanks, underground aquifers etc.,) seems to be the answer. There can be no doubt that these measures are extremely important. The publication ‘Facts’ also says so; so does the Gujarat Government’s 8th Plan in the chapter on ‘Approach to Development’. Here again what is needed is detailed planning and firm funding.

Dr. P.P. Patel who gives primacy to the development of local water resources regards an external source (canal water) as a supplement. Others (Eswaran, Vaidyanathan, Datye) envisage the use of canal water to recharge groundwater aquifers and fill local surface storages. The point that we pick up from the various comments cited above is that watershed development and local storages and conservation, the recharging of ground water aquifers, the filling of surface storages, etc. are very important, with or

without canal water from the SSP, and that there have to be detailed plans, cost estimates and financial allocations for them.

In the light of the foregoing, we would recommend as follows:

- (1) *A full list of all the 8214 villages and 135 urban centers to be provided with drinking water should be announced as quickly as possible. The quantity of water required as per the norms indicated should also be clearly specified.*
- (2) *The project authorities should state clearly the water-saving measures and the use-wise and area-wise re-allocations through which they propose to fill the supplies needed. (The quantity needed for drinking water will no doubt be small in comparison with irrigation needs, and the adjustment required may not present great difficulty, but a clear announcement of the reallocations seems desirable with a view to answering criticisms and allaying anxieties).*
- (3) *The agency or agencies which would be responsible for managing the actual water supply system for each village and each urban centre under the overall control or guidance of the GWSSB should also be identified and announced as early as possible.*
- (4) *The detailed physical planning of the water supply project (off-takes from the canal, filtration and purification plants, pumping, pipelines, etc) should be completed (if not already done) and should be published as early as possible.*

The financing arrangements for the entire scheme should be fully worked out and made public. The works themselves should be completed within a pre-announced time-frame.
- (5) *The detailed plans, the necessary physical arrangements and the funding needed for meeting the*

drinking water needs of the villages and towns in question during the next ten to twelve years (i.e. before the canal waters reach them) as also during the period of annual maintenance shut-down of the canals thereafter, should be firmed up and published as early as possible.

- (6) *Water-shed development and local storages and conservation, the recharging of groundwater aquifers, filling up of surface storages, etc., are very important with or without canal water from the SSP, and the necessary detailed plans, cost estimates and financial allocations should be made clear as early as possible.*

(emphasis added)

It is surprising that the Majority Judgement did not put its weight behind early implementation of drinking water plans. It could have demanded of the Gujarat Government an action plan. 'Early implementation' directive is confined to the construction of the dam, which is certainly not a sufficient condition for ensuring provision of drinking water. In that, the Majority Judgement has failed itself in spite of its deep concern for drinking water:

Water is the basic need for the survival of the human beings and is part of right of life and humans rights as enshrined in Article 21 of the Constitution of India and can be served only by providing source of water where there is none. The Resolution of UNO in 1977 to which India is signatory, during the United National Water Conference resolved unanimously inter alia as under:

All people, whatever their stage of development and their social and economic conditions, have the right to access to drinking water in quantum and of a quality equal to their basic needs.

It is a matter of great concern that even after half a century of freedom, water is not available to all citizens even for their

basic drinking necessity violating human right resolution of UNO and Article 21 of the Constitution of India.

The Majority Judgement says that the decision to construct the Sardar Sarovar Dam of 455 ft. was taken “as that was the only solution available to it (Gujarat) for providing water to water scarce areas.” This statement is repeated more than once. “..for one set of people namely those of Gujarat, there was only one solution, namely, construction of dam..”

Nor is it desirable in the national interest that where fundamental right to life of the people who continue to suffer due to shortage of water to such an extent that even the drinking water becomes scarce, non cooperation of a State results in the stagnation of the project.

One may ask which State the Judgement had in mind Madhya Pradesh or Gujarat? Since it furnished its scheme to the Tribunal some 25 years ago stating that drinking water needs of the villages in the command area of SSP will be met by local means and not by the dam, Gujarat has evidently done little to follow up its own promise on the ground – the thirsty remain thirsty, yet it continues to point an accusing finger at everybody else particularly the Madhya Pradesh Government, NBA, project affected people and activists, while its own Government leaders are reportedly playing football with this vital issue:

- **1993:** The then Gujarat Chief Minister Shri Chhabildas Mehta said that we do not have to wait for SSP to supply drinking water to Kutch, Saurashtra and North Gujarat. He said that we could just lift water from Narmada River and supply the areas through pipelines in two years.
- **1995:** BJP government came and scrapped the scheme.
- **1996:** Shri Vaghela became Chief Minister and he reviewed the scheme.
- **1998:** Shri Keshubhai Patel reappeared as BJP Chief Minister and axed the scheme.

2000: Gujarat Government is saying they want to take water from Mahi river to the areas and can complete the scheme in one year.

(South Asia Network on Dams, Rivers and People –
The Drought, the State and the People –
Himanshu J. Thakkar, 2000)

What the situation and circumstances needed but have been denied by the Majority Judgement is a **judicious mixture** of solutions – which are time-saving, cost-saving, improve drought proofing, food security and water availability and provide that the dam to the extent already raised and rain water harvesting co-exist in a spirit of load-sharing.

As, CSE points out:

In Indian context, rainwater harvesting is indispensable for fortifying food security, as rainfed land constitutes the bulk of the cultivated land.

Community-based rainwater harvesting has the potential to drought-proof the entire country.

India receives most of its rainfall in just 100 hours out of 8760 hours in a year. If this water is not captured or stored, there will be no water for the rest of the year.

Only 100 mm rainfall falling on a 1 hectare plot can yield upto 1 million litres of water.

The solution lies in harvesting rainwater through capturing, storing and recharging it and later using it during prolonged parched periods.

An average Indian village requires just 1.14 hectares of land to meet its drinking water needs.

Small is ecologically efficient as 10 dams with 1 hectare catchment will store more water than 1 dam of 10 hectare.

The problem is really mind-sets. Rainwater harvesting demands a new approach to governance itself – a participatory form of governance rather than a top-down bureaucratic one.

(Drought? – Try Capturing the Rain; Briefing Paper for Members of Parliament and State Legislatures, Anil Agarwal, Centre for Science and Environment, 2000)

V

How was the Availability of Narmada Waters Determined?

– Legal and technical facts vis-à-vis the Majority Judgement

Read with the Report of the Tribunal, the observations of the Majority Judgement appear to be in error – apparent from the record – on the crucial issue of hydrology. The reference is to the following conclusions of the Majority Judgement:

*The Tribunal **determined** the utilisable quantum of water of the Narmada at Sardar Sarovar Dam site on the basis of 75% dependability at 28 MAF.*

The Award provided for the period of operation of certain clauses of the final order and decision of the Tribunal as being subject to review only after a period of 45 years from the date of the publication of the decision of the Tribunal in the official gazette.

*What is important to note however is that the Tribunal's decision contained in clause II relating to determination of 75 % dependable flow as 28 MAF was **non-reviewable**. The Tribunal decision of the determination of the utilisable quantum of Narmada water at Sardar Sarovar Dam site on the basis of 75 % dependability at 28 MAF is not a clause which is included as a clause whose terms can be reviewed after a period of 45 years.*

(emphasis added)

The fact is that the issue of determination of utilisable quantum of water was not before the Tribunal and that the above observations of the majority are in error on two counts:

- (1) *it is not the Tribunal which 'determined' the utilisable flow at 28 MAF; the issue was not in its terms of reference*

- (2) *the Final Order of the Tribunal does not sustain the interpretation that the assessment of flow is "non-reviewable".*

As for (1) above, the facts are that though initially the Tribunal was charged with the responsibility to assess the utilizable availability of water from Narmada, subsequently, the disputant states decided to absolve it of that responsibility since they had reached an agreement on the issue (on 12.07.1974) among themselves 'with the assistance of the Prime Minister'. Thus the assessment of utilizable flow at 28 MAF was not determined or left to be 'determined' by the Tribunal. It was predetermined for it by the parties to the dispute. The record shows that the Tribunal accepted this alteration in its terms of reference:

Extracts from the report of the Tribunal

Agreement of Party States (Madhya Pradesh, Maharashtra, Gujarat, and Rajasthan) dated 12-7-74 and Subsequent Proceedings:

"It is agreed:

that the quantity of water in Narmada available for 75% of the year be assessed at 28 million acre feet and that the Tribunal in determining the disputes referred to it do proceed on the basis of that assessment;

(emphasis added)

In its subsequent proceedings, the Tribunal recorded its decision as follows:

There has been a serious controversy between party States as to what is the utilisable quantum of waters in Narmada at Navagam Dam Site on the basis of 75% dependability. This was made the subject matter of Issue No. 7 before the Tribunal. The parties are now agreed that the net available quantum of Narmada waters for use with 75% dependability should be assessed at 28 million acre feet.

Issues No. 7 and 7 (a): With regard to these issues, the Tribunal directed that they may be deleted as prayed for by the party States."

As for (2) above, namely, the validity of non-reviewability of the assessment of water flows at 28 MAF, the Final Order of the Tribunal dated August 16, 1978 does not support the interpretation of "non-reviewability". We may quote the relevant extracts:

Clause I: *Date of Coming into Operation of the Order.*

Clause II: *Determination of the Utilisable Quantum of Narmada Waters at Navagam Dam site.*

Clause III: *Apportionment of the Utilisable Quantum of Narmada Waters.*

Clause IV: *Order with regard to Excess Waters and Sharing of Distress.*

Clause V: *Period of Operation of the Order of Apportionment.*

Our Orders with regard to the equitable allocation in Clauses III and IV are made subject to review at any time after a period of 45 years from the date of the Orders of the Tribunal.

As the record shows, Clause V: Period of Operation of the order of Apportionment seeks to protect only the "Apportionment" of waters, that is, the share of different states, determined by the Tribunal as per clauses III and IV, from being subjected to any review before 45 years. Clause II: Determination of the utilisable Quantum of Narmada waters, is not covered by clause V. Reading all the clauses together I to V, it is difficult to infer that the Tribunal intended clause II to be "non-reviewable" before or after a period of 45 years. The Tribunal does not say so directly or even obliquely anywhere in the Final Report dated August 16, 1978. Such an intention cannot be read into the orders of the Tribunal.

Furthermore, it is evident from the text that there were certain decisions (clauses) of the Tribunal which it wanted to shield from a review anytime during the first 45 years. It therefore expressly prohibited any review of such matters before 45 years. In this context and otherwise, it can not be inferred that clauses not so shielded were not to be reviewed at all at anytime before or after 45 years.

But for the sake of argument even if we were to concede that the Tribunal did intend to make clause II “non-reviewable”, the question arises as to what was its authority to do so after it had deleted the assessment of utilizable water from its terms of reference. The matter was no longer in the precincts of the Tribunal when it issued its Final Order on August 16, 1978.

In the circumstances it can be legitimately held that any references by the Tribunal to the assessment of available quantity of Narmada water for utilisation at the Navagam Dam site, though relevant and necessary for purposes of other issues before it, are patently gratuitous from the standpoint of its jurisdiction, even if prefaced by such words as ‘determined’ or ‘decision’.

Through its prose (‘determined’), the Tribunal could not expand its jurisdiction or legitimacy or gain power in matters not included in its terms of reference; and especially when its participation was specifically excluded and it consented to such exclusion.

The Majority Judgement accepts that the domain of the Tribunal is confined to the dispute which cannot be settled by negotiations :

A dispute or difference between two or more State Governments having arisen which is a water dispute under Section 2(C) of the Act and complaint to that effect being made to the Union Government under Section 3 of the said Act the Central Government constitutes a Water Disputes Tribunal for the adjudication of the dispute in question, once it forms the opinion that the dispute cannot be settled by negotiations.

The determination of quantum of utilizable waters of Narmada at the Navagam Dam, was settled by negotiations as accepted on all hands including the Tribunal.

In the light of the foregoing facts, we conclude with regret that in the above matter, the Majority Judgement is in error on both counts, (a) that the Tribunal ‘determined’ the water flows or (b) that the so called determined estimate is ‘non-reviewable’

If this error is recognised, the Court may need to review its decision of 18, October 2000, in this matter, on its own volition.

Further, the Majority Judgement goes on the assumption that the decision of the Tribunal on the quantum was based on reports of technical experts; and is therefore conclusive.

In arriving at its final decision, the issues regarding allocation, height of dam, hydrology and other related issues came to be subjected to comprehensive and thorough examination by the Tribunal. Extensive studies were done by the Irrigation Commission and Drought Research Unit of India, Meteorological Department in matters of catchment area of Narmada basin, major tributaries of Basin, drainage area of Narmada Basin, climate, rainfall, variability of rainfall, arid and semi-arid zones and scarcity area of Gujarat. The perusal of the report shows that the Tribunal also took into consideration various technical literature before giving its Award.

This view too is not well founded. Hydrology has remained a contentious issue except for the short period when the over-awing personality of Prime Minister Indira Gandhi imposed unanimity on the former Chief Ministers who all happened to belong at the time to the Congress party.

The Five Member Group (FMG) appointed by Government of India in 1993 (and continued later at the behest of the Supreme Court) and discussed the various estimates of water flows ranging from 23 MAF to 28 MAF with a number of experts (names were listed) who expressed contrary views. Remember, this was 15 years after the report of the Tribunal. Therefore, in its first report the FMG, recommended unanimously that Government of India should have the assessment of water flows re-examined as expeditiously as possible. The need for such a re-examination was underscored by the fact that in their Second report in 1995, FMG members were divided on this issue 2:2. The Government of Madhya Pradesh has continued to press for a reconsideration. But no such reassessment is reported to have been made by Government of India. And, now the Majority Judgement has slammed the door on reassessment on legalistic grounds which as we have argued are not on all fours.

Further, as a Member of the aforesaid Group (FMG), I had reviewed the methodologies behind the estimates made by different technical / official agencies cited in the Tribunal’s report; as also tabulated their own admitted limitations. A look at this analysis does not give confidence that the estimate of 28 MAF could be regarded as based on adequate and unquestionable technical appraisal:

The Wallingford Report uses data of 1891-1948 series directly from NWDT (and adds that "there is no pretence in this document at carrying out similarly detailed calculations that are properly the preserve of Indian agencies");

NWDT accepts the agreement of the party States on the quantum of waters (28 MAF) in Narmada (and adds that the figure has been arrived at in the Official Level conference in 1966); and

The said Official Level Conference in 1966 presided over by the then Chairman of CWPC, went on record to say that **"it may be emphasised here that the studies/exercises carried out by the States have been prepared at short notice and in considerable hurry"**.

(emphasis added)

The same virtuous circle goes for the estimate of evaporation losses, regeneration, effect of carry over storage. It was first calculated by the official Level Conference in 1966 but qualified as having been prepared "at short notice and in considerable hurry". Twelve years later this estimate is adopted by NWDT which again qualifies that "these had not been derived from any detailed studies". As in 1995, the matter rests there.

A word about hindcasting. Hindcasting is not untouchable. It is a question of when to touch it (that is, the necessity for it), and with what caution. In the instant case, it is pertinent to recall the caution sounded by the Narmada Water resources Development Committee (1965) headed by Shri A.N. Khosla with regard to the use of data for hindcasting in this case:

"As indicated by this study, the construction of run off series could be considered adequate if extended backward only upto 1931. This provides a long enough series for yield analysis and has the merit of not appreciably vitiating the reliability of the series by inadequacy and maldistribution of rain gauges which existed in the years prior to 1931".

(emphasis added)

The Khosla Committee also recorded that:

"Gujarat have agreed that the run-off series should be from 1931 onwards only, considering the density and mal-distribution of rain gauges stations prior to 1931".

We need not question the conclusion drawn by CWC in its 1993 Paper that in the case of the Narmada Basin, the required data length is over 130 years for assessing utilisable flows; and its explanation that hind-casting had to be "resorted to improve the sample size to 79 years in technical body about the length for which data is required. Indeed longer the series the better. But we cannot incorporate any data just to elongate the series. There has to be a discrimination between what is admittedly more rigorous and reliable data.

CWC can not improve the quality of the data prior to 1931 at this stage. It is difficult to understand how they have chosen to transgress the 1931 line - if greater reliability of data for project planning is their primary concern.

CWC is our highest technical body in this field in the Government domain. Till today its guidelines for Project Planning for River Basin Development prescribe 40 years observed data as the basis (as in 1980), and 40-50 years (as in 1990). There is no amendment to these guidelines as of date. Nor were we given (though we asked for it) any project report for any project of this type, where more than 40 years data has been used as a basis for planning. CWC's view that SSP requires a base of 130 years data for safer planning purposes makes this project a historical monument.

(emphasis added)

Let us turn now to what the Tribunal contributed to this exercise. What it did was to get the technical experts of the States together who in turn completely annulled and reversed the advice of the Khosla Committee on the question of length of series that could yield reliable estimate in the instant case. To repeat, the Khosla Committee had advised (with which Gujarat had also agreed), that run of series should be "from 1931

onwards only” which while providing “a long enough series for yield analysis”, has also “the merit of not appreciably vitiating the reliability of series by inadequacy and maldistribution of rain gauges which existed in the years prior to 1931”.

To quote the Tribunal:

Hydrology – Discharge Observations And Run Off

After a discussion the Party States agreed to adopt the yield series from 1891 to 1970 as the basis for further studies taking into account observed volumes from 1948 to 1970 and hindcast series from 1891 to 1948.

“On 26th December 1974, the party States submitted to the Tribunal that the yield series agreed upon by the technical experts at the November 1974 meeting may be accepted and taken on record. The Tribunal agreed to this request.”

We leave it to anyone with a sense of responsibility to adjudge whether in the given case, hindcasting from 1891 could be regarded as a sensible choice.

There are no reasons or explanation given by the Tribunal itself (except to say that it was agreeing with the request of party States) as to how the hind casting from 1891 had emerged as more reliable in the post Khosla period which cautioned that for sake of reliability start from 1931 onwards only.

The States first agree politically to the volume of flows, the Tribunal accepts it; then the States doctor the yield series – the Tribunal takes it on record. The decision-making process had already dispensed with technical advice, when the figure of availability of water at 28 MAF was ‘**adopted**’ as a matter of **political expediency** by the Chief Ministers with the assistance of the Prime Minister. Probably the shadow of elections achieved results which had long eluded the light of engineering acumen.

A. Vaidyanathan reminds us:

Estimates of utilizable surface flow are nebulous both conceptually and in relation to their empirical basis. One could in principle think of utilisability purely in technical terms. This would require detailed surveys to identify all the possible

sites for storage or diversion of river flow, evaluating these sites from the viewpoint of engineering feasibility and the quantum which could be drawn for use. Such an exercise was attempted in the CWC during the fifties, and reports indicating potential sites, their storage capacities, and utilization were prepared for major river basins and their sub-basins. The reports have not been published, nor does the exercise appear to have been followed up by detailed field surveys and investigation to improve and refine the estimate.

(Water Resource Management – Institutions and Irrigation Development in India, 1999)

To conclude, we are not here to look askance at a higher hydrological flow should nature bestow that upon us in its munificence. To do so would be an act of ungratefulness. Nor are we here to belittle the most audacious engineering solutions. We are here to choose how much of the river’s bounty we can prudently entrap through engineering interventions which cannot be autonomous of other factors: finance, time, and the pressing needs of other drought afflicted areas; and our capacity to bear the uprooting of people which is here and now and certain – while, as past experience teaches us, what these majestic projects promise is neither so certain nor so near.

VI

Holding the height of the Dam — by ‘inadvertence’?

First, let us demystify the ‘height’ of the dam. We do not need engineers for this, our political bosses can do it. The self-same four Chief Ministers who settled the contentious issue of availability of water flows with the assistance of the Prime Minister, were also confident that **the Prime Minister could also decide the height of the dam:**

Agreement among 4 Congress Chief Ministers dated July 22, 1972.

The various view points with regard to the height of Navagam Dam would be gone into a suitable height may also be fixed by the Prime Minister of India.

(emphasis added)

While we are ready to entrust it to the politicians, we are not willing to heed the advice of the scientists. Consider the following exercise done by Department of Space:

Department of Space

February 8, 1990

Dear Shri Jain,

Thank you very much for providing an opportunity to me to present the Indian capability in remote sensing and its potential for the development of the country.

Regarding Sardar Sarovar and Narmada sagar the following tables will provide you with some insight.

Table 1: Areas of Submergence for Sardar Sarovar

<i>Height of the dam above sea level</i>	<i>455' (138.68M)</i>	<i>400' (121.92 M)</i>
1. Forest	14223 ha	8823 ha
2. Agriculture	11745 ha	2793 ha
3. Shrubs/Fallow/Rock out crops etc	1356 ha	674 ha
4. Water Bodies	9924 ha	3900 ha
Total Submergence	37248 ha	16190 ha
Total villages to be rehabilitated	127¹	39
Irrigation potential	18.9 lakh ha	10.6 lakh ha
Volume of water	0.95 mn ha mtr.	0.53 mn ha mtr

Thus as you can see if the height of the dam is reduced by just 17 meters, while the irrigation potential will be about 60%, the damage will be 2.5 times lesser and rehabilitation problem is drastically reduced.

Table 2: Area of submergence for Narmada Sagar

<i>Height of the dam above sea level</i>	<i>262 M</i>	<i>240 M</i>
1. Forest	41691 ha	12280 ha
2. Agriculture	25436 ha	5153 ha
3. Shrubs/Fallow/Rock out crops etc	20477 ha	735 ha
4. Water Bodies	3822 ha	2578 ha
Total Submergence	91426 ha	20926 ha
Total villages to be rehabilitated	123²	27

1. The figure of number of villages need updating. The number of villages affected at 455 feet, as per official records, is 245.
2. The figure of number of villages need updating, like in case of SSP above.

However irrigation potential figures for 240 M height are not readily available as there is a reluctance on the part of concerned authorities to provide these numbers.

While the figures regarding inundation versus height of the dam are accurate, taken from space remote sensing, the figures on irrigation potential (or alternately power production which will decrease as irrigation level goes up) are difficult to obtain from the concerned authorities. Notwithstanding, it the entire question is to be reop t and the available water flow. Normally, one would approach independently and see what is the most cost effective design which provides maximum benefit and minimal damage (even though this may not meet all our requirements).

Narmada-Sagar basin has experienced 30 earthquakes in the last two centuries, some of those of magnitude 6.5 and above in the Richter scale. A major fault zone of about 100 km width running East-North-East is not far away from the proposed dam site.

While I am keen not to get into the controversy, my main aim in making the presentation was to emphasize the benefits in using inputs available from space imageries, at least for the future dam designs. As of now, the Department of Space is not being consulted at the stage of appraisal. In the case of Narmada Sagar Complex, we were asked only to give watershed characterization for the major watersheds. I think it would be wise to make it mandatory to get all the possible information from Space Department and formalise the consultative mechanism even at this stage of Planning the dam height.

However, I hasten to add that in doing so, let us not make the department of Space a licensing authority which can be easily misused in stopping even worthwhile projects. On the other hand DOS would be extremely happy to provide all information which can be derived using Space imageries and cooperate in everyway so that the designs of

future dams are based on the principle of sustainable development to provide optimal advantage with minimal harm to ecosystems.

Yours sincerely,

U.R. Rao

*Shri L.C. Jain
Member
Planning Commission
Yojana Bhavan
New Delhi*

(emphasis added)

Not only scienfitic advice but prudence too has been abandoned. The issue of availability of water was not one of an academic combat between the two estimates: 23 MAF and 28 MAF, but one of making a prudent choice of the precise number out of these two extremes for purposes of planning.

For any unrealistic choice of utilizable flows whether on grounds of political expediency or any other expediency out of a range from a **low** of 23 to a **high** of 28 MAF can rain sorrow on all heads, especially when the height of the dam and all other related structures are to be designed and constructed on the basis of the higher estimate of utilizable water flows. The superstructure once so erected at great cost can not be downsized. Moreover, its consequences on displacement and hazard to environment, animal life et al which will all be correspondingly maximal cannot be reversed should the (cheerful) assumptions not materialise. This is the reason why we make bold to argue that the circumference of the error of the Majority Judgement is larger than the error in estimation of water flows alone.

Raising the height of the dam is a matter of a concrete feat. That can be accomplished — given cash and cement. **But is the height of the dam omnipotent enough to command the river to supply the requisite quantum of water that can sustain the projected height of the dam?**

Unfortunately, over estimating the availability of water is not unique to Narmada. It is a practiced art to over design the height of a dam. Writing on the “raging conflict” between Andhra and Karnataka over

the height of the Almatti dam P.S. Sundaram recalls “Dr. K.L. Rao expressed concern over projects being conceived (in the Krishna River) without reference to the availability of water”. [Quiet flows the Krishna? Not quite, Indian Express, 21 January 2001]

Regrettably, the Tribunal has not crowned itself with non-partisan glory. After 10 years of detailed consideration of the matter, it gave its Final Report on August 16, 1978; and in Clause VII of the **Final Report**, it ‘determined’ that the height of the dam should be 455 ft., but it did not come to the conclusion that it was necessary to debar a review of the height of the time at any stage. But, in its **Further Report** – the scope of which by law is restricted to giving explanations [2] following the Final Report, it said that on the most momentous issue – the height of the dam, it was by “inadvertence” that it had failed to apply the 45-year embargo for a review of the height of the dam. And, ordered quite unlawfully that its Final Order be amended accordingly. We will not go into the merits of the order but question the competence of the Tribunal if it were inadvertence or question its credibility if inadvertence was used as a cover for yielding to political pressures.

Our misgiving is reinforced by frequent somersaults by the Tribunal. For example, take the case of Rajasthan:

The Rajasthan Government, in their Note dated 17.12.1964 submitted to NWRDC stated that the lands in the State lying to the north of Gujarat border, had no source of irrigation and could be irrigated only if supplies were given from Narmada river or from the Mahi river.

The Tribunal examined whether Rajasthan was entitled to a share of the Narmada waters at all and concluded after citing a host of cases as under:

Our conclusion, therefore, is that the State of Rajasthan is not entitled to any portion of the waters of Narmada basin on the ground that the State is not a coreparian State, or that no portion of its territory is situated in the basin of river Narmada.

(emphasis added)

Subsequently, Rajasthan was brought in through the political door, after it was expelled by the Tribunal. The political door was the agree-

ment, referred to earlier between Madhya Pradesh, Maharashtra, Rajasthan and Gujarat with the assistance of the Prime Minister on the 12th July 1974.

Though Maharashtra and Madhya Pradesh agreed in the Prime Minister’s political parlour to meet some of Rajasthan’s needs, serious differences arose as to how it was to be done. The Tribunal reported:

At this stage, it is necessary to deal with the argument of Maharashtra and Madhya Pradesh that in determining the question of the FSL of the Narmada Canal, the allocation of 0.5 MAF to Rajasthan is not a relevant consideration and ought not be taken into account. In support of this as argument, reference was made to clause 4 of the Agreement dated 12.7.1974 which states: “that Rajasthan will get for use in its territories 0.5 MAF without prejudice to the height of the canal”.

The argument stressed on behalf of Maharashtra and Madhya Pradesh is that the level of the Narmada Canal cannot be decided by the mere fact that 0.5 MAF of water was agreed to be given to Rajasthan for use in its territories.

(emphasis added)

Maharashtra argued that it would be possible for Gujarat to select enough areas to be served by flow irrigation from the command of 190 canal to use all the water which was likely to be allotted to it under any scheme of equitable distribution and that lift irrigation would not be needed. If however Gujarat elected to irrigate some areas above the command of the 190 canal by lift, it might do so on its own.

We are unable to accept the argument of Madhya Pradesh and Maharashtra that in executing clause 4 of the agreement dated 12th July 1974, the four party states intended that the Rajasthan areas were all to be irrigated with 0.5 MAF of Narmada water by the grossly uneconomical method of lift irrigation.

This time, the Tribunal cited another host of cases in support of retraction of its earlier order which had held that Rajasthan was not a co-

riperian State. It now decided that Rajasthan be not only allocated a share of Narmada waters – and in spite of objections from Maharashtra and Madhya Pradesh, it decided that Gujarat be allowed to raise the level of the canal (and the height of the dam).

Some clue is available as to how this reversal of the decision of the Tribunal came about:

At Indira Gandhi's behest, Rajasthan is given 1,325 million cubic metres (mcum) and Maharashtra 607.5 mcum out of a total of 68,040 mcum water available from the Narmada, annually.

(State of India's Environment, Fifth Report, 2000, Centre for Science and Environment)

The Majority Judgement states that in the determination of the height of the dam at 455 ft the Tribunal was also influenced by the fact that Gujarat had to be enabled (a) to meet the needs of drinking water of scarcity areas which had no other means other than dam, of getting water for drinking purposes, and (b) 'to reclaim the desert area in the Ranns of Kutch'. The facts, apparent from the record, show that here again the Majority Judgement is in error.

First, we have already dealt with the drinking water argument, and shown from the records of the Tribunal that the Gujarat Government had submitted to the former in writing that it did not require Narmada waters for meeting drinking water needs of the scarcity areas; and the Tribunal proceeded on that basis.

Second, the reclamation of the Ranns of Kutch. On the basis of technical advice the Tribunal had already concluded before determining the height of the dam that the Ranns of Kutch could not be served by Narmada waters and had accordingly reduced the apportionment of Narmada waters to Gujarat on that ground. To quote the Tribunal:

Irrigation water requirement of Gujarat will be discussed under the following broad heads:- 1. In Zone I to XI; 2. In Mahi Command; 3. In Banni and Ranns

Banni and Ranns:

Based on a study of the documents and field visit I have arrived at the conclusion that Rann's area is characterised by high salinity, a very low horizontal permeability, a vertical

permeability of nearly nil, a high ground water table and impervious layer near the ground water and low rainfall. From this description it could be easily understood that reclamation of the area, even if possible, will be a very difficult task. It has not been established till now whether or not desalinisation of soil is possible. Neither the pot experiments conducted at the Soil Research Institute, Baroda, nor the experiments conducted at Umrath in 36 acres of land could be extrapolated to this area. More information, for example, about the effect of solid salts on the permeability, the alkali hazards, the permeability after the application of sub-soiling etc, yet remain to be investigated. The Pilot plots in Banni area on light soils of Banni have, no doubt, shown the possibility of growing crops but they have not investigated and generated data from which design parameters for effective reclamation of the area could be derived.

Even if it is assumed for argument that the area could be reclaimed and developed with the quantity of water indicated, the return of investment will be prohibitive for undertaking such a venture.

Gujarat's claim of 6.36 MAF of water for irrigating 11 lakh acres in the Ranns and Banni does not merit consideration in the equitable apportionment of waters in Narmada River.

As referred to earlier, the Tribunal report also records that apportionment of water for domestic drinking purposes was not included by Gujarat in its demand.

The typical sleight of hand which is at work in most large irrigation projects has escaped the attention of the Majority Judgement. Namely, first understate the height of the dam, the size of auxiliaries and thus total cost to make it easier to obtain financial and other approvals; second, seal the approval with a foundation stone by a VIP [3]. And then in calculated stages push up the scale of the project and its cost beyond recognition; and thus armed ward off all objections on the ground that the Prime Minister had already laid the foundation stone. If this sounds fanciful, consider the historical facts relating to Sardar Sarovar.

In February 1961, Gujarat approved the construction of a dam with FRL restricted to 160 ft. This was done after investigations extending

to over 14 years. Two months later in April 1961, it got Prime Minister Nehru to lay the foundation stone. To quote the Tribunal:

Commenced in 1947 most of the sites were inspected by engineers or geologists, overall by a Committee headed by the AN Khosla and by CWPC. By 1955, Navagam site was chosen for a dam influenced by hydro-electric potential. By 1960, it was decided to implement it in two stages FRL restricted to 160 ft. with provision for wider foundations to enable raising of the dam to 300 ft. In February 1961, Gujarat Government gave approval of Stage I.

But, says the Tribunal, no work was started on the construction of the Dam after Nehru laid the foundation stone in April 1961:

The construction of the approach roads, colony etc. was taken up, but the construction of neither the dam with wider foundations, nor the canal with FSL 158.4 was taken up.

Two years after Nehru laid the foundation stone, Gujarat put forth a new project with FRL +425 ft, i.e. raising the height from 160 ft. to 425 ft. It is remarkable that while it took 14 years preparatory work to formulate the project with FRL 160 ft., it took only two years after Nehru had laid the foundation stone to come up with a project more than two and a half times the height of the original. That shows that the Foundation stone was merely a façade and explains why no construction work was undertaken after Nehru had been trapped to lay the foundation stone. Instead, Gujarat kept upscaling the dam to dizzy heights every two years : 1961, 1963, 1965.

Year	Height (ft.)
1961	160
1963	+ 425
1965	+ 490

Says the Tribunal :

In August 1963, a brief report on Narmada Project was prepared with (FRL + 425) which proposed to provide only a

*high level canal with FSL + 295. A Stage III was provided to include reclamation of Little Rann of Kutch. It also provided irrigation by lift to 7.5 lakh acres in Saurashtra, Kutch etc. **However this canal was not shown as going upto Rajasthan.***

(emphasis added)

Subsequently in January 1965, Gujarat submitted a Technical Memorandum in which the dam at Navagam was proposed to be constructed to (FRL + 490).

(emphasis added)

The Tribunal records the combat which was going on between different States on the periodic changes in the height of the dam:

As per para 56 of Volume I of the Statement of the Case of Gujarat, under the heading ‘Navagam Canal and its commanded area, the FSL of the proposed Navagam canal has been proposed by Gujarat as + 300.

Madhya Pradesh has objected to the Navagam Canal being any higher than with FSL 190, as that would involve submergence of Madhya Pradesh territory, and loss of power potential of Madhya Pradesh.

Maharashtra prays disregard any proposal of a canal with FSL higher than 190, or of the Sardar Sarovar Dam with FRL higher than RL 210.

(emphasis added)

In November, 1963, the Union Minister of Irrigation and Power held a meeting with the Chief Minister of Gujarat and Madhya Pradesh at Bhopal. As a result of the discussions and exchange of views, an agreement (Bhopal Agreement) was arrived. Madhya Pradesh however did not ratify the Bhopal Agreement.

The Chief Ministers of the four States, namely Gujarat, Rajasthan, Maharashtra and Madhya Pradesh met variously on 22nd August, 1966, Pachmarhi on 23rd May, 1967 and in New Delhi on 22nd June, 1967. Thereafter, at New Delhi on 18th December, 1967. This meeting also proved infructuous. Meanwhile, Nehru had left us. The foundation stone laid by him was gathering moss.

The Tribunal records that in 1968:

The State of Gujarat objected to the proposal of the State of Madhya Pradesh to construct Maheshwar and Harnphal Dams over the river Narmada in its lower reach and also to the agreement reached between the States of Madhya Pradesh and Maharashtra to jointly construct the Jalsindhi Dam over Narmada in its course between the two States. The main reason for the objection was that if these projects were implemented, the same would prejudicially affect the rights and interests of Gujarat State by compelling it to restrict the height of the dam at Navagam to FRL 210 ft.

Madhya Pradesh and Maharashtra, as noted earlier, had pointed out the unwisdom of trying to raise the level of the canal to irrigate just 0.5 ha. in Rajasthan. Could it not be done by other means? they asked. But their objections were overruled.

Taking together the fact that (a) in 1963 the high level canal of FSL +295 “was not shown going up to Rajasthan and (b) Tribunal ruled that Rajasthan was not a coreparian State, one gets an uncanny feeling here that induction of Rajasthan was part of a game plan to secure a political push to justify the case for a higher height of the SSP Dam.

The Majority Judgement notes that as late as in 1986, the Union Ministry of Water Resources Environment and Forests was still **discussing if the project should be taken up at all**:

*In October, 1986, the Ministry of Water Resources prepared and forwarded to the Ministry of Environment and Forests, a note on environmental aspects of the two projects and noted the urgency of the decision. It also considered the importance of the project, **should the project be taken at all...***

(emphasis added)

Majority Judgement records that in 1987, i.e. nearly ten years after the AWARD of the Tribunal, the Minister for Environment and Forests had recommended approval to the Narmada Sagar and Sardar Sarovar Projects subject to three conditions, the first of which was [4]

i) Review of design parameters to examine the feasibility of modifying the height of the dam;

*With regard to review of design parameters and dam height, the Ministry of Water Resources had examined the same after taking into consideration the comments of the Central Water Commission and concluded that the reduction of the FRL of the Narmada Sagar Project **would not be worthwhile**.*

*The note also stated that in view of the technical report, reduction in the dam height **did not appear to be feasible**.*

(emphasis added)

This shows that the idea of **review** of the Tribunal’s decision about the height of the dam, was not regarded as sacrilegious or unlawful. Even the Ministry of Water Affairs and Central Water Commission merely said it is not ‘worthwhile’ or ‘did not appear to be feasible’ — whatever they meant [5].

The recommendation of the Minister of Environment apparently rang an alarm bell and Gujarat mounted political pressures on the Prime Minister to give Environmental Clearance, as evident from the detailed account of notings on files, letters, desperate pleadings to ward off “mischief makers” etc., reproduced by the Majority Judgement.

PMO (January 15, 1987)

The matter is urgent as last week CM Gujarat has requested for green signal to him before 20th January.

The clearance of the project, however, should be communicated within two weeks as I have been informed by Shri Shiv Shankar and Shri Bhajan Lal that interested parties are likely to start an agitation and it is better if clearance is communicated before mischief is done by the interested parties.

(emphasis added)

It is noteworthy that Shiv Shankar and Bhajan Lal who had nothing to do with Gujarat also jumped in the fray to influence on Rajiv Gandhi.

On 31st March 1987, Shri Shanker Singh Vaghela, the then Member of Parliament, Rajya Sabha, states that the foundation stone for the Narmada Project had been laid 25 years ago by the late Pandit Jawaharlal Nehru and that after the Tribunal’s Award, Mrs. Indira Gandhi had

cleared the project in 1978, but still the environmental clearance was now being delayed on account of so-called environmental problems.

Ironically, the Majority Judgement has cited all these notes/letters exerting political pressures on the decision-making process, as evidence of how a “very careful examination” was being made of environmental aspects prior to the giving of a clearance, whereas the pressures were in fact being applied to nullify the reservations of the Ministry of Environment.

We are also informed by the Majority Judgement that the Prime Minister Rajiv Gandhi, “instead of giving approval, made the following note:

“Perhaps this is a good time to try for a River Valley Authority. Discuss”.

PMO (April 8, 1989)

This case has got unduly delayed. P.M. was anxious that speedy action should be taken. The three Chief Ministers may be requested to come over early next week to give their clearance in principle for the setting up of a River Valley Authority so that simultaneous action can be initiated for giving practical shape to this concept.

“On 30th April, 1987, a press note was released by the Government of India, in which it was stated that in a meeting presided over by the Prime Minister, it was agreed by the Chief Ministers of Madhya Pradesh and Gujarat and representatives of Maharashtra Government that, a high level River Valley Authority would be set up for the control and development of the river basin. This press note also stated that the Narmada Sagar and the Sardar Sarovar Project on the river Narmada had been cleared.”

From the text and context it is clear that the agreement for the establishment of a River Valley Authority was made primarily to obtain clearance for SSP from Prime Minister Rajiv Gandhi.

Twelve years later in 1999, Vaidyanathan points out that so far not a single River Basin Board empowered to take up integrated development of water has been set up in the country. Is this not a flagrant violation of the condition attendant to the clearance? Or was the Prime Minister just being playful?

It is argued at some length that even if conditions are not met, environment clearance is not “lapsible” an explanation recorded in the Majority Judgement rather approvingly.

All this long review is to bring home the point that there are many considerations overt and covert, other than “scientific” and “technical” that have consumed the past 38 years since Nehru laid the foundation stone for SSP at the behest of Gujarat. Gujarat itself was the first to back out immediately thereafter from constructing the Dam which it had sponsored and approved after 14 years of preparatory investigation to progressively shift the heights upwards from 160 ft. to 300 ft., to 425 ft. to 490 ft. at different times. Thus prolonging the agony of the people in the scarcity areas waiting for drinking water.

Though it has castigated the petitioner NBA for Latches (a subject to which we return later), it is remarkable that there is not a word of censor to be seen in the entire Majority Judgement about the killing delay of 38 years by Gujarat and all. Or a reference to the constructive responsibility of Gujarat for the delays which started with it as after Nehru had lent his hands, it did nothing for two years (except build staff quarters which is typical of our public projects; the colony for the staff is built immediately on start, while the displaced families wander homeless for years).

As noted earlier, the Majority Judgement has now been persuaded by the respondents that a dam with a height of 455 ft. is “the only solution” to meet the drinking water (and irrigation) needs of Gujarat’s scarcity areas on the grounds that the Tribunal had said so. We have dealt with this argument extensively earlier.

Again, we summon A.Vaidyanathan for some pertinent wise words:

The tribunals have done the best they can with the information and expertise available to them. Both these are however far from adequate.

At best their awards provide a starting point. It is extremely important to have a continuing organization to generate the basic data, monitor the evolving pattern of water use and their impact, and to periodically review the plans in the light of accumulating experience.

VII

Rehabilitation — a sensitive task

The Approach

The burden is not just a financial burden. That is the least part of it. It is the burden of dealing with human beings in a human way so as to rehabilitate them physically, mentally and otherwise. Essentially it becomes even more a psychological problem than a mere financial one.

(Jawahar Lal Nehru, 1949)

To start with, we must remind ourselves that of the 25 million persons displaced since 1950 on account of development projects, less than 50% have been rehabilitated – the rest ‘pauperised’ by the development process, of which, 40% are tribals. There are other estimates which suggest that the number of displaced persons is more than double the figure of 25 million [6]. But even the number 25 million is heart-breaking enough to beckon us to proceed with utmost caution and caring.

The Majority Judgement recognises the profound and deeper implications of what displacement does to human beings:

Displacement of people living on the proposed sites and the areas to be submerged is an important issue.

Realising the fact that displacement of these people would disconnect them from their past, culture, custom and traditions.

The R&R plans are required to be specially drafted and implemented to mitigate problems whatsoever relating to all, whether rich or poor, land owner or encroacher, farmer or tenant, employee or employer, tribal or non-tribal. A properly drafted R&R plan would improve living standards of displaced persons after displacement.

Some of this concern about the displaced persons being ‘disconnected’ was sought to be addressed at least partially, by the Tribunal when it handed down “a ruling principle” to govern resettlement of the persons displaced by the Sardar Sarovar Project (SSP):

— resettlement “as a group” in accordance “with the oustees preference” was to be the ruling principle

The Tribunal recognized that their resettlement **as a group** in accordance with **their preference** was an essential enabling condition for the displaced to be able to retain some of their ‘past, culture, custom and traditions’.

Ironically, for inexplicable reasons, the Majority Judgement knocks the bottom of its own concern about the displaced being ‘disconnected’; and cripples the **ruling principle** for resettlement set by the Tribunal:

*This provision could not be interpreted to mean that the oustees families should be resettled as a **homogeneous** group in a village exclusively set up for each such group. **The concept of community wise resettlement, therefore, cannot derive support from the above quoted stipulation.***

(emphasis added)

It does not stop there; the Majority Judgement goes incredibly further to vitiate the very principle as principle: It makes out that a ‘group’ does not have to be **homogeneous** or a **community** having an identity. If the Tribunal expected it to be disparate and amorphous and yet be a group, where was the need to have resettlement on a group basis as the ruling principle?

While resettlement as a group in accordance with the oustees preference was an important principle/objective, the other objectives were that the oustees should have improved or regained the standard of living that they were enjoying prior to their displacement and they should have been fully integrated in the community in which they were resettled.

(emphasis added)

These objectives were easily achievable if they were resettled in the command area where the land was twice as productive

*as the affected land and where large chunks of lands were readily available. This was what the Tribunal's Award stipulated and **one objective could not be seen in isolation of the other objectives.***

(emphasis added)

The Majority Judgement obliterates the distinction between **principle** and **objective** by making them interchangeable: "principle/objective", though the meaning of the two is quite distinct:

Principle

A fundamental truth or doctrine, as of law; a comprehensive rule or doctrine which furnishes a basis or origin for others; a settled rule of action, procedure, or legal determination. That which constitutes the essence of a body or its constituent parts.

(Black's Law Dictionary)

Objective

Something toward which effort is directed; an aim or end of action.

(Webster)

There could be a host of objectives to advance a principle, and while no one objective need be seen in isolation with the other objectives – and they might all be good in themselves, yet none of the objectives singly or collectively could be a substitute for and dispense with the principle which is of the **essence**.

All the constituents of R&R programmes have to show that their objective is to promote/protect the principle of 'resettlement as a group' and 'with the oustees preference'. Dispensaries, schools, approach roads, ration cards, have all their important place – and may be far better than what the displaced persons had in their original habitat – but they cannot be a substitute for the principle of resettlement on a 'group basis' – which embodies the central concern voiced by the Majority Judgement itself that displacement 'disconnects' – that is a soul shaking experience – a cultural and psychological trauma as Nehru perceived in those dark days of partition of India.

What could be the intent of the Majority Judgement in taking us into this territory at all? Is it to provide a rationalization for the abysmal failure of the authorities to conform to the ruling principle? We fail to find any other explanation for it.

Whatever be its intent, in effect the Majority Judgement has liberated R&R programme from the clutches of the principle rather than from the clutches of bureaucracy, and reinforced the hold of the bureaucracy by telling the displaced that instead of trying to reconstruct or regain their old homogeneous community, they had better get lost – get assimilated in the "community" in which they are transported, join the **mainstream** and live happily thereafter ('green pastures'). The only snag in this is that none of us – judges, bureaucrats, voluntary organisations, academics – are required to state let alone impose our preference. It has to be the **preference of the oustees**, the affected persons as the Tribunal ruled.

Apart from the ruling principle, the Tribunal also laid down a criteria:

The displaced had to be "better off" than they were. It added that the displaced be provided land for land and the land given to them should be within the command areas of the project unless they wanted to be settled elsewhere.

For the authorities to assist the displaced persons to the point that they become **better off** – and for the authorities to be sure that the Tribunal's criteria had been met, one can visualize atleast three vital preliminary steps:

A benchmark survey of the existing conditions of living/livelihood/cultural life – **and particularly, their resource base** – natural, social, cultural, traditional wisdom and methods of healthcare, education, etc.

- i) a comprehensive and cogent plan [7] imbibing the findings of the aforesaid benchmark, survey and setting goals after arriving at what would constitute a "better off" status than before.
- ii) The plan to ensure that as directed by the Tribunal the displaced were (a) resettled on a group basis and (b) within the command area of the Sardar Sarovar – another mandate of the Tribunal obviously aimed at equity namely those who are uprooted to pave the way for the project also share in some of the benefits accruing from it.

- iii) Presenting the plan in all its details to the affected and obtaining 'their preference' – before proceeding.

None of these steps have been taken by the authorities hitherto except in a manner that could safely be called: piecemeal and peripheral; they make an "offer" – take it (or leave it). It is soulless.

A test of compliance with the directions of the Tribunal in the matter of R & R should have been and would still be for SSP authorities to produce for public and Judicial scrutiny the census and benchmark survey of the existing conditions of the displaced families – which had been completed or even initiated before the construction work started.

The fact is that while the essential preparatory work for R&R has not been done except in a perfunctory manner, work on the construction – which was directed by the Tribunal to follow R&R with a lag – has been going apace. One can detect violations from the very start of the dictum: rehabilitation to precede construction. The construction work was started in 1987 i.e., a year before the project was even approved by the Planning Commission in October 1988; and within a few months of the **conditional** environmental clearance in June 1987. Besides, Gujarat had already contracted a large World Bank loan "made available from 6th January 1986" that is long before the Planning Commission approval of the Project. Are we to understand that this loan was sitting idle paying 'commitment charges' to the Bank, for over two and a half years between January 1986 and October 1988 while the Planning Commission approval for the project was being awaited?

The Majority Judgement has relied more heavily than warranted by the ground realities, on the list of "benefits" being offered by the authorities to displaced persons to make them "better off" than before; and on various on-going development programmes which are stated to have been pressed in to service for rehabilitation of the persons displaced by SSP:

The existing development programmes were strengthened for ensuring sustainable development at the rehabilitation sites. These were Integrated Rural Development Programme (IRDP) for agriculture, business and village industries; Integrated Child Development Scheme (ICDS) for nutrition, health and education; Jawahar Rojgar Yojna (JRY); aids for improved seeds, fertilizers, irrigation, animal husbandry;

Training Rural Youth for self-employment (TRYSEM); Employment Guarantee Schemes (EGS).

Unless the performance of these aforesaid development programmes at the "rehabilitation sites" is unique, their record is pitiable as per Planning Commission's Mid-Term Appraisal 2000:

Integrated Rural Development Programme (IRDP)

- *53 million families were covered under the IRDP programme till 1998-99 at an expenditure of Rs. 13,700 crores*
- ***However, only 15% beneficiaries could cross the poverty line.***
- *24% of assets did not generate any income and another 50% of the assets did not make any contribution to income, subsidy element has led to large scale corruption on the part of block and bank staff, and on the part of borrowers themselves. Recovery rate is less than 40%.*

Jawahar Rojgar Yojana (JRY) and Employment Assurance Scheme (EAS)

The main objective of JRY and EAS was the generation of additional gainful employment for the unemployed and under employed persons in rural areas.

- ***Evaluation of the programmes for wage employment points out inadequate employment. Generation of Sustained and Gainful Employment not realised. Employment for 31 days per person per year; very high cost of Employment Generation; funds allocated to Villages which did not require EAS; the effective annual coverage of the target group in a block works out to only 5 per cent; activities undertaken did not have the potential for sustained employment generation.***

- *Today Rs. 60 out of Rs. 100 in wage schemes is reserved for wages, but in reality only Rs. 10 to 15 actually goes to the poor worker, the rest is illegal income for bureaucracy, contractors and politicians.*

(emphasis added)

Drought Prone Areas Programme (DPAP)

Rs. 2195 crores spent on DPAP alone; Drought prone area increased from 55.3 m ha in 1973 to 74.6 m ha in 1995; Insufficient evaluation of the quality of works, even run-offs not measured; Survival rate of plantations was very low.

(Comptroller and Auditor General of India, 1999.)

Training of Rural Youth for Self Employment

In one State, under TRYSEM places shown as 'training centres' were non-existent. It appears that the stipend and the raw material money were pocketed by the vested interests including the block officials.

Health Care (ICDS etc)

The Majority Judgement also records elaborate provisions claimed to have been made by the authorities to care for the health of the displaced. A Medical cell has been set up for providing services and treatment to PAPs free of cost. The cell is headed by Deputy Director (Medical) and is having a nucleus of medical experts consisting of a physician, a paediatrician, a gynaecologist, 21 MBBS doctors, pharmacists etc. Among the salient features of the medical help programme for the benefit of PAPs is included:

Nutrition supplements are given to children (upto 6 years), expectant and lactating mothers through the Integrated Child Development Scheme (ICDS).

It is difficult to say a word about the efficacy of these medical services without site inspection. But at a general level we can look at Gujarat's status in one or two selected aspects where the impact of nutrition supplements etc. should count to some extent. Infant mortality rate (IMR) and mortality rate (MR) below age 5 is an important indicator

of health care services. Here we recall some results reported by the National Family Health Survey (NFHS I and II). We take the Western Region.

	IMR		MR	
	NFHS I	NFHS II	NFHS I	NFHS II
	1988-1992	1994-1998	1998-1992	1994-1998
Maharashtra	50.5	43.7	70.3	58.1
Gujarat	68.7	62.6	104.0	85.1

NFHS II Report also observes on the quality of the services:

Overall, although the quality of care for family planning and health services is far from satisfactory in any of the states, some states need to work much more than other states to improve their health and family planning services, particularly services that are provided by the public sector. A review of all the quality of care indicators suggests that the quality of care is relatively poor in West Bengal, Uttar Pradesh, Orissa, and Arunachal Pradesh. The states with relatively good performance on the quality of care indicators overall the Haryana, Maharashtra, and Tamil Nadu, followed closely by Himachal Pradesh, Punjab, Meghalaya, and Mizoram.

The point to note is that Gujarat is conspicuous by its absence from the list of good performers.

Once again we are reminded of Nehru's sorrow:

What I object to is a certain mental approach to the problem which I consider totally inappropriate. That approach may be described as a typical official approach and it is prevalent all over the Secretariat. It has its virtues. But it has its very definite failings also. In a matter like the treatment of displaced persons, these failings become more apparent.

Because you have allotted a sum for the treatment of T.B. patients in hospitals, it does not follow that T.B. displaced persons are going to be looked after.

The official approach is that having allotted a sum for T.B. patients, we have solved the problem of their treatment.

We must also reckon with the fact that the dams are causing health hazards to the population surrounding them – and thus the challenge of meeting health care needs is much larger than that of the displaced persons.

High rates of incidence of serious health problems are documented by three independent studies: NCAER, Health Impact of Indira Gandhi Nahar Project (August 1991); URMUL Trust's on going health status data bank (1990-1991); and B.K. Tyagi and K.V.S. Verma, "Anopheline Mosquitotoes of Sri Ganganagar district (Rajasthan) Transmitting Malarial parasite, "Journal of Applied Zoological Research 2:2 (1991): 85-91. URMUL Trust has conducted comparative studies of poor canal settlers and poor non-canal villagers in the same region (Lunkaransar) and found that the latter sample had relatively better health and nutrition conditions largely because of their access to nutritious cattle products and traditional rain-fed crops. The former group, though they worked in canal agriculture, lost their cattle in the transition and grew cash crops such as cotton, mustard, and groundnut which they owed to their merchants and could not eat. The non-canal village residents also had access to traditional and ayurvedic remedies, whereas these are scarcely available in the CAD-produced canal settlements.

*('There's A Snake On Our Chest':
State and Development Crisis in India's Desert.
By Michael Robert Goldman, 1994)*

Rehabilitation of the uprooted by definition is not an easy task. But as shown above we are making it more difficult than necessary. In fact, the problem has been compounded by several other avoidable factors:

The Tribunal which settled the scheme of the SSP project grossly underestimated the absolute numbers to be uprooted and resettled by a factor of 1:6, that is, from 7,000 to 41,000. This six-fold increase does

not represent full coverage; a census has not been done, nor all categories of the displaced been included. The fact that there is a material change in the assumptions and estimates of the Tribunal can not be minimised on the ground, (as the Majority Judgement has sought to do) that some of the increase in the number of the displaced families is due to the 'liberal' provisions made by Gujarat and other states on their own or on the advice of the World Bank, subsequent to The Tribunal's Award. That matters least to the displaced; but it matters most to those who have to find land and solace for the affected.

To repeat again and again that notwithstanding material changes the AWARD of the Tribunal is **binding** is to rely more on law than life. Is the Tribunal to be obeyed blindly even where it has proved to be grossly in error? God unwilling if there was a seismic threat in the vicinity, shall we still raise the structures to the Tribunally determined specifications? This is not fanciful. Recall the note of caution sounded by the Space Department:

Narmada-Sagar basin has experienced 30 earthquakes in the last two centuries, some of those of magnitude 6.5 and above in the Richter scale. A major fault zone of about 100 km width running East-North-East is not far away from the proposed dam site.

It is odd, to say the least, that while the dimensions of rehabilitation have increased at least six fold, if not more since the Tribunal gave its AWARD, every thing else (e.g. the height of the dam) remains unchanged.

Madhya Pradesh has to bear the brunt of displacement [8].

Suggestions by Madhya Pradesh which could help to reduce the total number to be displaced have been resisted by Gujarat and the engineering establishment in Delhi. Maharashtra and Rajasthan who are least affected have not shown any humility and opposed Madhya Pradesh's proposal, although recall as stated earlier Maharashtra was adamant that SSP should not be allowed to go about FRL 210 ft., and asked the Tribunal to "ignore" any proposals from Gujarat to raise the dam height above that level or allow Rajasthan a share in Narmada Waters. It has truly been a political football match with states switching sides and shifting their positions in and out of season. And, now the suggestions by Madhya Pradesh, to moderate the height of the dam have been shot down altogether by the Majority Judgement.

The manner in which actual rehabilitation has been carried out by and large, is neither in accordance with the principles laid down by the Tribunal, nor efficient i.e., in accordance with a well drawn plan. Nor is it sufficiently humane – lacking the requisite sensitivity that Nehru did not tire of emphasizing.

Given their special interest, the nexus of contractors-engineers-politicians has been pushing the construction work ahead, which was otherwise to follow rehabilitation after a lag as prescribed by the Tribunal and the Supreme Court. Construction has been overtaking rehabilitation and thus intensifying both distress and distrust in the bonafides of the implementation authorities and weakening their moral influence.

The distress and distrust have been further accentuated by the scheme of rehabilitation actually offered, its officious underpinning, that is, the manner and culture of its administration as experienced and perceived by the affected persons. For example, it offers bullocks to the resettlement family, but no grazing land. “Salient features of the rehabilitation programme” of Gujarat says that Project Affected Families “are given productive assets to purchase bullocks”.

In the same breath, the Majority Judgement adds approvingly: “it is rightly contended by the State of Gujarat that grazing land was not mandated or provided for in the Tribunal’s Award”. Recall, in an earlier section we have attempted a portrayal of life of the poor – dependence on animals on commons and the community. is the significance of the word community really understood?

The Majority Judgement has maintained studied silence over practical suggestions for improving the institutional arrangements especially making them transparent, consultative and compassionate which are essential for any satisfactory rehabilitation endeavour. Indifference by the Central/State Governments and the Majority Judgement towards recommendations of FMG is a case in point. FMG had stressed that a vital necessary step was to make the official R&R sub group/committee broad-based, opened to representation of affected persons, access to plans, information and monitoring reports:

Extracts from Reports by FMG

Reports by Official Agencies

At our request copies of the agenda notes and minutes of some of the more recent meetings of the R&R Sub-group of the NCA, the NCA itself and the Sardar Sarovar Construction Advisory Committee (SSCAC), as also the 9th, 10th & 11th Report of the R&R Sub-group to the Supreme Court, were made available to us. We have also seen the reports of two field visits which were annexed to the M.P. Government’s submission.

At the 27th meeting (18.10.94) the Chairman of the R&R Sub-group expressed concern that the State Governments did not seem to be “effectively gearing R&R work to match the required elevation of the dam to make the SSP worthwhile to a minimum extent for the purposes for which it had been conceived and was being executed.”

“A statement indicating the construction levels of the dam blocks achieved up to 30th November, 1994 vis-a-vis the progress till June, 1994 as circulated by the Govt. of Gujarat indicates the dam height had been raised by 1 m and 2 m respectively above the levels approved by the SSCAC in the previous meetings. Madhya Pradesh expressed serious concern at this lapse.

The Committee after detailed discussions decided an attempt by the GOG to advance the schedule of construction without adequate regard to the R&R aspects led to infructuous expenditure and invited adverse comments from the Comptroller & Auditor General of India. (4.8.2.5)

Further, at the 57th Meeting of the SSCAC held on 3 January 1995, there appears to have been a lack of complete agreement on the further construction programme.

The Government of Maharashtra had also set up a Committee consisting of Shri Manekrao Gawit, Member of Parliament and Shri Vivek Pandit, to investigate the rehabilitation of people from Maharashtra affected by the SSP. This Committee submitted its report on 17 December 1994. It

has made a number of recommendations. Among these, one is, to the effect that permission to raise the construction of the dam should not be granted till outsees have been wholly rehabilitated and legally relocated according to NCA and SC principles.

The Tribunal had stipulated that land offered a year in advance. The Supreme Court said that rehabilitation should be completed in six months in advance of submergence. **Now it is being argued that time-limit of six months presents difficulties and that the time-limit is not practical.**

Finally, there is an attempt to change the very definition of 'rehabilitation'. It has been argued that the action taken by the rehabilitation authorities to offer alternative land, house plots and compensation six months in advance, **may be taken as the fulfilment of the legal obligation stipulated under the Award.**

We strongly urge that there should be the strictest adherence to the NWDT's stipulations and the Supreme Court's decisions and the closest conformity to the declared philosophy and principles of R&R. There should be no compromise in this regard.

Our understanding of how the project got into such difficulties on the R&R front is as follows: It would probably be true to say that the project was embarked upon without the fullest possible appreciation of the intensity and diversity of its adverse impacts, leaving these matters to be worked out as the implementation of the project proceeded.

The numbers of project-affected people have gone up over the years. The NWDT had gone by an estimate of round 7,000 families whereas current estimates are in the region of 41,000 families, (i.e., the number had gone up by nearly six times that estimated by the Tribunal); the population affected had consequently risen to over 1.27 lakh as per the estimates of the Narmada Control Authority.

Of the over 1.27 lakh population affected Scheduled Tribes Population was 63223 (more than 50%) and Scheduled Castes 10775 (another 8%).

The numbers above relate only to submergence affected people. That the actual number affected was expected to be larger.

Over the years the task has become larger and the administrative difficulties have grown; and this is reflected in the proceedings of the R&R Sub-group, SSCAC and the NCA. The difficulties are likely to increase substantially in the context of the huge numbers which will be affected in 1997 and 1998.

A Master Plan, with detailed time schedules, should be got ready within the next six months.

At all times the people should be kept informed of the steps contemplated. The flow of information should be full and timely.

Change the nature of the R&R Sub-group from a predominantly official committee to a more broad-based one with an adequate non-official component, including not merely a few selected non-officials but also members who will represent the viewpoints of the affected people effectively, as also representatives of the NGOs assisting them or associated with the R&R work.

Make similar changes in the structure of the Environment Sub-groups while the recommendations and decisions of the Environment and R&R Sub-groups may be subject to review by their principal, namely the NCA, they should be binding on the SSCAC.

Make copies of the periodical reports of the M&E agencies, the minutes and reports of the R&R and Environment Sub-groups, and the NCA/SSCAC/Review Committee agenda notes and minutes available on request to the NGOs concerned.

The Majority Judgement appears to have ignored these recommendations altogether. Not only it avoids choosing even one suggestion out of this package, the Majority Judgement goes out of its way to repose full confidence in the official committees as they are today.

And, this indifferent stance is baffling because after the two reports of FMG – last in April 1995, the Supreme Court did recognize these harsh ground realities about the appalling state of resettlement and rehabilitation, and in May 1995 clamped a ban on further construction of the dam till R&R was improved. The ban continued for nearly four years. It was rescinded only in February 1999. It is another matter that the field reports on which it based its order to rescind the ban were not thorough and in some cases not even accurate. “Progress” was seen more from the viewpoint of the administration rather than the affected whereas a sense of belonging and satisfaction of the displaced should have been the test of “successful rehabilitation”. **The most intriguing aspect of the Majority Judgement is that it does not even refer to the Supreme Court’s four year long ban on construction of the dam between 1995 and 1999.**

These problems notwithstanding, the Majority Judgement has ordered Madhya Pradesh to keep quiet and quickly obey the Tribunal; to quote:

The State of Madhya Pradesh is keen for the reduction of the dam’s height to 436 ft.

The Award of the Tribunal is binding on the States concerned. The said Award also envisages the relief and rehabilitation measures which are to be undertaken. If for any reason, any of the State Governments involved lag behind in providing adequate relief and rehabilitation then the proper course, for a Court to take, would be to direct the Award’s implementation and not to stop the execution of the project. This Court, as a Federal Court of the country specially in a case of inter-State river dispute where an Award had been made, has to ensure that the binding Award is implemented.

In this regard, the Court would have the jurisdiction to issue necessary directions to the State which, though bound, chooses not to carry out its obligations under

the Award. Just as an ordinary litigant is bound by the decree, similarly a State is bound by the Award. Just as the execution of a decree can be ordered, similarly, the implementation of the Award can be directed. If there is a short fall in carrying out the R&R measures, a time bound direction can and should be given in order to ensure the implementation of the Award. Putting the project on hold is no solution. It only encourages recalcitrant State to flout and not implement the award with impunity. This certainly cannot be permitted.

The Court has the power of direction, but what the situation demands is understanding and dispassionate consideration of the harshness of ground realities as well as some of the steps suggested to ease the burden. But all suggestions are frowned upon for inevitably they point a finger at the need to moderate the height of the dam to some extent. The latter has acquired a sanctity of its own – indeed acquired a sanctity higher than human rights.

The Majority Judgement has not taken cognition of the fact that while State Governments were parties before the Tribunal and subject to its AWARD, **the people affected were not a party nor invited to be a party before the Tribunal** even though no project of this scale can be put on the ground, let alone succeed, without the willing consent and active participation of the people. Can they be bent to the will of the Tribunal by the coercive power of the State as some of the observations of the Majority Judgement imply? **Does it not amount to punishment by proxy heaped on them notwithstanding our democratic edifice and rule of law?**

The purpose of recall and reference to the ideology of the Majority Judgement which amounts to viewing displacement not as a **necessary evil** but as a **desirable good**, was to find an explanation for its extraordinarily harsh approach and attitude towards suggestions for reducing the number of oustees. It is odd that suggestions to moderate the number of the displaced have come to be treated as improper, if not indecent.

It is this approach which has led the Majority Judgement to not only reject the suggestions made by MP to reduce the number of oustees

but also, as noted earlier, to reprimand the MP State Government with rare indignation and resoluteness for not producing the land. But for the sake of argument, even if land were available for resettlement should it not be the overriding concern of State Policy, and moreso the Supreme Court – the custodian of human rights to **minimise** displacement to the bare necessity, and to be seen to be doing so. On the other hand, it has thrown its weight for higher output of electricity to ensure higher consumption of electricity – which it regards as a measure of higher standard of living.

Recall, what we reported earlier: the sensitivity analysis by the Space Department to see how the project could be modified to curtail displacement and submergence. Also, the Ministry of Environment's proposal to PM, that the project scale be modified with the same aforesaid objectives.

What is obnoxious about these proposals? Yes, they are against what the Tribunal said. Of course, Tribunal Award has to be viewed with respect. But in retrospect is it not a fact that **the decisions of the Tribunal were based on its grossly erroneous estimate of the families that would be required to be displaced? That number has now increased phenomenally by 600 per cent. If the Tribunal were alive it would die of shame.**

The only instance of Gujarat having taken notice of the existence of FMG, was when it quoted FMG that 'rehabilitation was not impossible'. Its words were torn out of context. It was not a statement in a vacuum. It meant that for to become possible, lot of changes in existing rehabilitation arrangements and some decisive new steps would be necessary given the phenomenal increase in total numbers, and the fact that a significant proportion of them are of the tribal population, and involving transfer to other states/cultures. Ignoring the aforesaid package of recommendations made by FMG, the Majority Judgement has regrettably pushed the achievement of the R&R task closer to being impossible, by keeping the official machinery insulated from representatives of the affected people, and by not obliging it to be open, transparent and providing regular information to the public.

In the instant case the Tribunal itself eliminated supply of irrigation water to 6.5 lakh ha. to the Ranns of Kutch. The Gujarat Government "left out" large areas of Kutch and Saurashtra from the supply of Narmada Waters from SSP. Again, before the Tribunal and in the post Tribunal period, Gujarat has stated that it will arrange to

meet the drinking water needs of Kutch, Saurashtra and North Gujarat by means other than water from SSP. It has said the same thing about areas 'left out' of the SSP command. Madhya Pradesh is on record that it is willing to forego some of the power benefits for sake of reducing the number of persons to be displaced.

Our needs for water and energy are enormous which no single project can meet and as Prime Minister Vajpayee has said "that no single solution ought to be relied on for meeting them".

In contrast, consider the rigid and rather unfortunate approach of the Majority Judgement that the decision of the Tribunal is binding and must be obeyed by the parties at all costs.

And it addresses the people who were not party to the Tribunal proceedings in the same way and debars them from raising their voice and challenging the arbitrariness and inequities of the project as they see them.

The comfort it offers is that the Gujarat's rehabilitation package is the "best ever". Anything would be better than the miserable deals in the past. We have to be merciful that there is at least a rehabilitation scheme. But **"rehabilitation is not a panacea"**. It is the height of disregard for human dignity to ask you to disconnect and exchange all your existence for what is atrociously called **compensation**. Either agree to the terms or be coerced:

Gujarat High Court in its judgement of April 1993 ruled that there should be no forcible eviction, no temporary submergence and no temporary removal of the oustees without completing rehabilitation as per the Award.

The Majority Judgement states that "now" the Gujarat Government has "realised that without effective R & R facilities no further construction of the dam can be permitted". This is a clear acknowledgement that hitherto, even after the orders of the Tribunal, the Supreme Court and the Gujarat High Court, Gujarat Government had not realised that R & R was a condition precedent to construction. The Majority Judgement has expressed confidence that there is no reason to doubt that the Narmada Control Authority would not be able to direct and oversee the operations satisfactory. The NCA must be blessed with a rare touch, competence and compassion to be so implicitly trusted by the Majority Judgement that the former will do well by the persons displaced by the

Sardar Sarovar Project. The performance of their official counterparts managing other projects make one hang one's head in sorrow. For example, the 5th Citizens of Environment Survey of CSE reports:

Rengali Dam: 12,500 families displaced in 1973 by the Rengali dam are for the past 25 years languishing inspite of assurances by Prime Minister Indira Gandhi. "They do not have land to earn their livelihood, many are deprived of drinking water and minimum healthcare is a dream for them".

Hirakud Dam: "More than 6000 families have not received any compensation so far, having been displaced by the dam built during 1948-1957"

Other dams: The CSE report cites several similar cases of other dams: Naniborsan on Kavjan River (Gujarat), Sirisailam (Andhra), Ukai (Gujarat), where rehabilitation is agonising.

The Majority Judgement has directed that "within four weeks from today (i.e. October 18, 2000)", the Narmada Control Authority (NCA) shall "draw up an Action Plan to further construction and the relief and rehabilitation work to be undertaken" and to "fix a time frame so as to ensure relief and rehabilitation pari passu with the increase in the height of the dam".

One crucial safeguard for assured R & R in advance, is transparency of construction, full public disclosure of schedule and detailed R & R plans by the authorities. It is to be assumed, that the Court expects the Action Plan to be made public by the NCA so that it is widely known to the (affected) persons who are to be provided relief and rehabilitation. As of now, that is, more than two and half months of the date of the Judgement, the Plan of Action has not been made public (inspite of requests by NBA). This can undermine the Court's confidence that there is no reason to 'conjecture' that the official machinery will not perform properly.

What is not recognised sufficiently is that there is an easier and more humane course open to us for meeting our practical needs of water and energy. People are more than willing to adjust, change and even sacrifice, if (a) they are informed what we are aiming at or planning to do and have considered all possible options (b) we not only inform them but also take their counsel and consent into account

before proceeding and (c) make them the first among the beneficiaries of 'development benefits' to be harvested from the project and (d) liberate decision-making processes and institutions/committees from the closed door monopoly of bureaucratic clap trap. Monopoly and tyranny are twins.

Fifty years ago at the inauguration of the Supreme Court, the distinguished Attorney General, Mr. M C Setalvad reportedly said: I hope the Court will earn and live by the reverence of the people — words to that effect.

VIII

The Petition and the Petitioner — how treated?

The petitioner Narmada Bachao Andolan (NBA) born in 1986 is a product of the Government's plan for transfer of Narmada waters via dams and canals; and the way this development impinges upon the people whose life flows along the two sides of the River Narmada, especially, people who are affected by Government's development scheme which was evolved without any consultations with them – literally behind their back.

The Majority Judgement has wondered what was NBA doing between 1986 to 1994 when it filed the writ petition. It has held it guilty of latches:

As far as the petitioner is concerned, it is an anti-dam organisation and is opposed to the construction of the high dam. It has been in existence since 1986 but has chosen to challenge the clearance given in 1987 by filing a writ petition in 1994. In our opinion, the petitioner which had been agitating against the dam since 1986 is guilty of latches in not approaching the Court at an earlier point of time.

The charges of latches is not sustainable from the facts of the case which were before this very Bench via the linked Writ Petition No. 1201 of 1990 filed by Dr. B.D. Sharma. What was happening in the Narmada valley between 1986 to 1990 was well documented by Dr. B.D. Sharma namely efforts were being made to secure fair play and just treatment from the authorities. To recapitulate:

The Struggle in Narmada Valley: The Narmada Valley Project has a special significance in relation to displacement, rehabilitation and the paradigm of development. This project comprising a series of projects perhaps is the biggest in the whole world. It also has the dubious distinction of being a project which will be responsible for the largest displacement

in the whole world. About 70% of the project-affected persons in Sardar Sarovar are members of the Scheduled tribes.

The struggle of the project affected people in Sardar Sarovar started with the issue of rehabilitation. The concerned state governments in response to this movement have made many improvements in their policies of rehabilitation and also implementation.

But the distance between the project-affected people and the government has been gradually increasing. The people now have stopped talking about rehabilitation and have taken a decision not to leave their homes and are offering total opposition to the project itself.

It is a pity that the interaction with the project-affected people has been rather devoid of human sensitivity. In the absence of necessary grace from the side of the State, the resolution of every single point involved a protracted process beginning with unseemly dispute, struggle, long anxious wait by the people for the outcome and in the end minimal concessions just for passing over the crisis and fulfilling the formality. This process has continued for years.

One inevitable consequence of this approach has been that the reliability of government data and their promises came to be seriously questioned. And the people on their part in this process became more and more conscious about their own situation, their rights and the broader context. The people also gradually came to realise the bitter truth that, as the matter stands today, their rehabilitation was not possible.

There is uncertainty on a number of elementary issues such as the definition of displaced persons, their entitlements, the difference between the field situation and government records, dissonance because of changing criteria, neglect of the problems of transition, estimates about the land necessary for rehabilitation, financial outlays, etc.

It is clear, notwithstanding the promise about 'land for land', that land is not available for rehabilitation and rehabilitation of people as communities is not possible.

As stated earlier, this Writ Petition was linked by the Supreme Court to the Writ Petition of NBA. In its Writ Petition in 1994, NBA too had submitted the following facts and pleas:

That this Writ Petition is being filed in public interest for protecting the rights of life and livelihood of the persons directly affected by one of the biggest inter-state multi-purpose Project ever undertaken, with largest irrigation network in any project in the world, known as Sardar Sarovar Project (SSP) on the river Narmada. The impact of the project extends to an immense area and affects a very large number of people, especially tribals. At least 1,50,000 people, in 245 villages, live in the area affected by submergence. In Gujarat and Maharashtra almost all are tribals. In addition, the projects will displace lakhs other from their lands and livelihoods.

The Petitioner is an organisation of the tribal and non-tribal people from the Narmada Valley affected or to be affected by the Project. The Petitioner also has as its components more than 50 support groups in various parts of the country and is supported by a wide network of organisations, scientists, social workers, human rights activities and environmentalists. It is formed to protect the human and democratic rights of the people in the Narmada Valley who are largely tribals and form the most marginalised section of our population and also to highlight and fight against other adverse impacts of SSP.

The Petitioner has been by lawful, non violent, peaceful and democratic means raising a number of issues related to development, plans and policy of the Government for the tribals and other down-trodden sections of society whose rights are trampled upon and who are displaced from their homes and lands for the purpose of Projects which they are not even made aware of and from which they derive no benefits.

The grievance of the Petitioner in this petition is that a large number of persons, mostly tribals and other marginalised sections of society are being forcibly displaced and uprooted from their homes and lands on account of this Project without giving them any opportunity to be heard and without properly compensating or resettling them and without even properly

explaining to them the nature of the Project and seeking their participation in the project for which they are being displaced.

The above facts would show that from its birth in 1986, NBA continued to knock the doors of the executive at all levels to seek information, rehabilitation help and justice for the affected people which was its main aim. It did not rush to the Court during this period hoping to secure a fair deal and human response from the executive itself. It would have been indeed improper on its part to have rushed to the Court without exhausting all other avenues. Should it be faulted for not rushing to the Court immediately after its birth? Its efforts to seek fair and just treatment for the displaced from the executive infact continued through 1993.

In 1993, it was invited by the Union Minister of Water Affairs for discussions. It readily responded. Officials were also present from Central and from States. Independent observers, NGOs, were also invited by the Ministry of Water Affairs. It is after these discussions that the GOI decided to set up an independent Five Member Group (FMG) whose composition and terms of reference were decided by the GOI. NBA also made extensive representations before the FMG.

But as the Supreme Court was informed via the report of the FMG, the Government of Gujarat boycotted the proceedings of the FMG and also refused to allow FMG to visit Gujarat for an on the spot study or give any information to the FMG which was set up by the Central Government. That in our Federal system, to which the Majority Judge-ment has made a reference, a State Government could boycott a Committee set up by the Central Government is itself a testimony to the spirit and attitude of the Gujarat Government to any independent and informed discussion of the issues affecting people around SSP. It went as far as to have the Gujarat Assembly pass a resolution that FMG should not be allowed to visit Gujarat(!) So, not only people are not provided information, but even the Committee appointed by the Central Government was barred from a dialogue with the Gujarat authorities.

This hard stance of the Gujarat Government injured the hope that NBA had that through FMG, the Central and the State Governments involved will get better informed of the ground realities and problems; and thus the affected people will have a chance of redressal. But Gujarat's non-cooperation nay opposition to FMG dashed NBA's hopes.

In the light of this, one can assess the correctness of the Majority Judgement's sweeping indictment that NBA is "an anti-dam organization", that since 1986 it had been "agitating against the dam" and "chosen different paths to oppose the dam":

The petitioner has been agitating against the construction of the dam since 1986, before environmental clearance was given and construction started. It has, over the years, chosen different paths to oppose the dam.

At its instance a Five Member Group was constituted, but its report could not result in the stoppage of construction pari passu with relief and rehabilitation measures.

Having failed in its attempt to stall the project the petitioner has resorted to court proceedings by filing this writ petition long after the environmental clearance was given and construction started.

It has been the effort on the part of the petitioners to persuade this Court to decide that in view of the difficulties in effectively implementing the Award with regard to relief and rehabilitation and because of the alleged adverse impact of the construction of the dam will have on the environment, further construction of the dam should not be permitted. The petitioners support the contention on behalf of the State of Madhya Pradesh to the effect that the height of the dam should be reduced in order to decrease the number of oustees.

Not once has the Majority Judgement acknowledged that NBA was representing the problems of the affected people, who after years of trying, were forced to turn against the dam itself by the obduracy and excesses of the executive, (as Dr. B D Sharma had so well reported in his writ petition) and which prompted the Gujarat High Court in 1993, to direct that people must not be moved against their will and that no force and coercion should be used.

Further, it is difficult to appreciate, what is so offensive about exploring means to reduce the number of oustees?

Besides, it is perplexing that the Majority Judgement should say that "its (FMG's) report could not result in the stoppage of construction pari passu with relief and rehabilitation measures." On the

contrary, within a month of the FMG submitting its second report on 17th April 1995, the Supreme Court itself ordered the stoppage of further construction of the dam in May 1995, and continued the ban on construction for nearly four years till February 1999, based on its recognition that rehabilitation was not being done as prescribed by the Tribunal and the Court.

As noted earlier this significant fact finds no mention in the Majority Judgement. Notwithstanding this omission, the four year ban by the Supreme Court on construction of the dam more than affirmed NBA's pleadings about the poor state of R & R, and the use of force and coercion against the oustees. That these were not inventions by NBA for opposing the dam for its own sake as has been suggested, got recognised solidly by the Supreme Court itself, in 1995.

The Supreme Court was not deterred during these four years of its ban by the fact that 'thousands of crores of rupees had already been spent and that delays might add to the cost', because clearly, it was moved by the plight of the affected displaced people and appaled at the recalcitrance on the part of the Gujarat authorities to respond to their problems constructively and with a human touch.

Suddenly, now the Majority Judgement has put the project above the people and taken the view that even if some people suffer in the process, others will after all benefit. The tables have now been turned on the Petitioner for 'latches', for obstructing progress of the dam and causing costs to escalate. The Courts, it says will not interfere in a project started by Government 'after very careful consideration', 'after considering different options' and 'where thousands of crores have already been spent'. On the last score, it needs to be said that what has been spent so far is barely one fifth of what would be consumed by way of crores of rupees. Should we be pennywise and pound foolish?

More importantly, in what has been called 'careful consideration' by the authorities, they have heard only each other within the Secretariat, but not the affected people or independent experts. So, too much can not be made of 'a decision having been made after very careful consideration' which excluded the people. A two-legged stool can not stand.

The obvious distaste for and condemnation of the Petitioner, even if assumed to be justified, ought not to have led the Majority Judgement to slam the doors of justice on the face of the affected people who were also before the Court through the Petition. And remember, as

reported by Dr. B.D. Sharma, they had arrived there after years of agony, struggle and after knocking all other doors in the faith that here in the apex Court they will receive a just treatment. The Judgement side-stepped the wisdom of one of its own distinguished brothers:

It must not be forgotten that procedure is but a handmaiden of justice and the cause of justice can never be allowed to be thwarted by any procedural technicalities.

It is not necessary to point out, least to the Supreme Court, that in any case no one can rush a plaint to it before a project is approved and thousands of crores have been spent, as the people are kept in the dark about such deals till the plague erupts in the life of the people. And, even if by chance one could get hold of a blue print of a project before it starts and were to prefer a plaint, would the Court entertain it? Would the Court not demand from the petitioner proof of the steps taken by the latter to seek redress from the authorities before knocking the door of the Court? Here the helpless, the socially disadvantaged and uprooted by the mighty State, failed to get a fair treatment, whereas it was a fit case for light of justice to bend at least at the edges.

We make bold to commend that all of us including the judiciary refresh our perspectives with the voice that resonated in the Constituent Assembly some 50 years ago:

How long shall we continue to live this life of contradiction? How long shall we continue to deny equality in our social and economic life? We must remove this contradiction at the earliest possible moment or else those who suffered from inequality will blow up the structure of political democracy which this Assembly has labouriously built up”.

(B.R. Ambedkar)

Notes:

[1] For some other sources on this theme we draw attention to:

1. Basic needs and much more with one kilowatt per capita”, Jose Goildenberg, T. Johanson, A.K.N. Reddy, R.H. Williams, Royal Swedish Academy of Science, 1985.
2. The new development oriented approach to energy planning, A.K.N. Reddy, Indian Institute of Science, May 1987.
3. Ecological Modernisation — new perspective for the industrial society, Udo Ernst Simonis, International Institute for Environment and Society, Berlin (West), lecture delivered at India International Centre, New Delhi, May 1987.
4. Environmental Priorities in India and Sustainable Development, T.N. Khoshoo, 73rd Session, Indian Science Congress Association, January 1986.
5. Reconciliation of economic growth and environmental protection, O. Balatsky, Lenin Polytechnic Institute, June 1987.
6. People and Planet: Alternative Nobel Prize Speeches, editor, Tom Woodhouse, Right Livelihood Foundation, 1987.
7. Substantial livelihood thinking : an approach to poverty, environment and development, Robert Chambers, IDS, Sussex, 1986.

[2] The scope of the Further Report, as stated in the Majority Judgement: The Tribunal is required to investigate the matters referred to it and then forward to the Central Government a report setting out the facts as found by it and giving its decision on it as provided under Sub-Section (2) of Section 5 of the Act.

On consideration if such decision in question requires explanation or that guidance is needed upon any point not originally referred to the Tribunal then within three months from the date of the decision, reference can be made to the Tribunal for further consideration and the said Tribunal then forwards to the Central Government a further report giving such explanation or guidance as it deems fit.

[3] The Majority Judgement itself repeatedly refers to Nehru having laid the

foundation stone. "The project in principle was cleared more than 25 years ago when the foundation stone was laid by the late Pandit Jawahar Lal Nehru". It is a travesty of truth to suggest that the project was "cleared" in 1961. It is the foundation stone which was laid in principle. The project of FRL 160 ft. for which the stone was laid was never built – except for staff quarters no construction was started. A whole new project with a +425 height buried the project whose foundation stone was laid by Nehru. But dial Nehru name served the purpose when ever the project was in trouble.

- [4] The other two conditions were:
- a. **Preparation in due time, detailed and satisfactory plans for rehabilitation, catchment area treatment, compensatory afforestation and command area development;**
 - b. Setting up of Narmada Management Authority with adequate power and teeth to ensure that environmental management plans are implemented pari pasu with engineering and other works.
- [5] Note that the exercise by the Space Department could not be concluded on likely reduction in irrigation potential with a reduced height of the dam, as the relevant authorities did not give it the requisite data.

Second Report of FMG in its report to the Supreme Court recorded that it too had a similar experience with regard to qualifying likely reduction in the quantum of power potential if the FRL is reduced to 436' FMG received two varying estimates from Gujarat and MP. It approached Government of India (with its vast power technocracy) to respond to the two estimates. But FMG was disabled from rendering any firm advice. To quote FMG "In their submission, the Government of India have not attempted their own assessment of the reduction of the power benefit **but have merely referred to the Tribunal's estimate**". One is compelled to suggest that the reference to Tribunal's estimate was an effort to evade providing independent advice even in such a technical matter. It was known to the Central power agencies that what had transpired on the ground in the system of power generation was substantially at variance with the stipulations of the Tribunal.

"The Tribunal had calculated that with the FRL at 436' instead of 455', the loss of power generation would be seasonal. However, the power component of SSP as now being implemented is significantly different from what the NWDT had envisaged. The NWDT had provided for 5 conventional units of 150 MW each aggregating to 750 MW in the RBPH and 5 conventional units of 75 MW each amounting to 375 MW in the CHPH, the total capacity being 1125 MW. Now, however, the installed capacity of RBPH is raised to 1200 MW and it now is an underground powerhouse; installed capacity of CHPH is reduced to 250 MW and reversible turbines are being installed in the RBPH to function in the

pumped-storage mode. Thus, the factors with reference to which the Tribunal had made its calculations have changed and the calculations have to be made fresh.

"The MP Government makes the point that there has been a delay in the project construction as also in the receipt of the T.G. sets for the RBPH and that work on the canal is going ahead, with the result that the particular configuration and phasing of power generation and irrigation development that the Tribunal had envisaged is not materialising."

- [6] "The total number of large dams constructed or under construction, according to the Central Board of Irrigation and Power (CBIP) is 4291. Therefore, as per our calculations, the total area that can be expected to be submerged is 4291 X 8748 ha, which is a whopping 37,53,7668 ha (approximately 37.5 million ha). Based on this, the number of people displaced, using the average of 1.51 persons per ha, would be an astounding 56,681,879 (approximately 56.68 million)... However, given the hesitation of the government to make data available it is the best estimate that can be made. In any case, what it does establish is that the displacement figures cannot be anywhere as low as suggested by some official sources. At best the variation would be of the order of 25%.

Together, nearly 62% of the population displaced were tribals and members of the scheduled castes. Considering their population nationally is only a little over 24.5%, clearly their representation among those displaced was disproportionately high. [India Country Study prepared for the World Commission on Dams].

- [7] We will not use the word 'master' plan, for the Majority Judgement says, the Tribunal did not prescribe a 'master plan'. In fact, it goes to some length to demolish the claim made by the Petitioner that a master plan for rehabilitation was requires to be prepared. This is another example of its over anxiety to defend the erring authorities. However, interestingly, the Narmada Control Authority – the principal creature of the Tribunal had no difficulty in recognizing the wishes of the Tribunal that a 'master plan' for rehabilitation was required as per the orders of the Tribunal.
- [8] FMG reported that "The Government of Madhya Pradesh have mentioned a number of difficulties and problems relating to R & R, such as the steep increase in the number of Project Affected Families in M.P alone (from 6147 at the time of the NWDT Award to the present estimate of 33014); the inability of the Government of Gujarat to give adequate land before each stage of submergence; the difficulty in finding sufficient irrigable land in the command area where the displaced had to be settled as per the Tribunal.

Some other reviews of The Supreme Court Judgement on Narmada

1. Dilip D'Souza: (*We never had to give up our homes so a dam could be built*, Rediff News, Oct. 20, 2000; *Potato Head Hypothesizing*, Dec. 30, 2000)
2. Prashant Bhushan: (*People be dammed*, The Hindustan Times, Oct. 21, 2000)
3. Arundhati Roy: (*The People vs the God of Big Dams*, The Times of India, Oct. 25, 2000)
4. Shekhar Singh: (*The Karma of Dams*, Indian Express, Oct. 25, 2000)
5. Kuldip Nayar: (*Re-Striking roots*, Business Line, Oct. 28, 2000; *The Story for us*, Indian Express, Jan. 02, 2001)
6. Prabhash Joshi: (*Nyay Nahin Nimay*, Rashtriya Sahara, Oct. 28, 2000 & *Supreme Court in ghanti Bajai hai*, Jansatta, Nov. 05, 2000)
7. Rajendra Sachar, Justice (Retd.): (*Narmada: a human rights issue*, The Hindu, Oct. 30, 2000)
8. Anupam Gupta: (*For and against big (Narmada) dams*, Tribune, Oct. 30, 2000)
9. Yogendra Yadav: (*Medhabehan ko ek Chitthi*, Dainik Bhaskar and Hindustan, Oct. 2000)
10. People's Union for Democratic Rights: (*Reality and the law seldom meet*, Nov. 2000)
11. Amrith Heredia: (*Narmada: The chicken and egg syndrome*, Deccan Herald, Nov. 1, 2000)
12. Pamela Philipose: (*Forgotten and damned*, Indian Express, Nov. 01, 2000)
13. Banwari: (*Sandar Sarovar ki Chakachaundh*, Rashtriya Sahara, Nov. 01, 2000)
14. Manoj Mitta: (*Verdict that flummoxes*, Indian Express, Nov. 02, 2000)
15. Neera Chandhoke: (*Social struggles & human rights*, The Hindu, Nov. 02, 2000)
16. Devaki Jain: (*For whom the bell tolls*, The Hindu, Nov. 02, 2000)
17. Rajeev Dhawan: (*The Narmada decision*, The Hindu, Nov. 03, 2000)
18. Ashwini Bhatt: (*Climax at the Apex*, Nov. 03, 2000)
19. Ram Guha: (*Unquiet flows the Narmada*, Telegraph, Nov. 3, 2000)
20. Jai Sen: (*The SC & the Narmada Case*, Hindu, Nov. 06 & 07, 2000)
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